

THE
FARMER'S LETTERS
TO THE
PEOPLE of ENGLAND:
CONTAINING

The SENTIMENTS of a PRACTICAL HUSBANDMAN, on various Subjects of great Importance :

PARTICULARLY

The Exportation of Corn.	The Proceedings of the Society for the Encouragement of Arts, &c.
The Balance of Agriculture and Manufactures.	The Importance of Timber and Planting.
The present State of Husbandry.	Emigrations to the Colonies.
The Circumstances attending large and small Farms.	The Means of promoting the Agriculture and Population of Great Britain, &c. &c.
The present State of the Poor.	
The Prices of Provisions.	

To which are added,

S Y L V Æ:
OR,
OCCASIONAL TRACTS
ON
HUSBANDRY and RURAL ŒCONOMICS.

The SECOND EDITION, corrected and enlarged.

Quicquid in orbe vides, paret *mibi* † : Florida tellus
Cum *volo* fundit opes ; scopulique, atque horrida saxa
Niliadas jaculantur aquas.

PETRON.

† *Agriculturæ* scilicet.

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T H E

FARMER'S LETTERS.

L E T T E R I.

MY fellow countrymen, it is a Man in obscurity that addresses you—but he addresses you on points of great importance; on subjects which nearly concern your being *as* an independent people; and every enjoyment of life *as* any people at all. However inelegant his language may be; however he may be wanting in a display of erudition, his subject and the thought and attention he has given it, will, he hopes, plead powerfully in excuse for his *manner* of treating it.

I apprehend it will be allowed by every one, that it is not only the *number* of a people that is the glory of a state, but their *employment*. The knowing precisely what employments are most beneficial to the public good, is a matter of infinite consequence,

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but

but not attended to with that care it deserves. I shall endeavour in this letter as plainly as possible to elucidate this subject; to state the different degrees of populousness arising from different professions; to consider how well our present agriculture and manufactures are harmonized; and the different value to the state of the hands employed in each. This will naturally introduce the ensuing subjects, and open the way to enquiries curious, easy and important.

In a round of different professions, all must either absolutely or relatively depend on each other; and some amongst them will be of that general importance as in a great measure to be the foundation of all the rest. It will require no long chain of reasoning to prove that such primary professions ought chiefly to be encouraged, as their well-being will naturally give rise to, and support the secondary ones—such a connection and dependance is consequently natural.

Agriculture is beyond all doubt the foundation of every other art, business, or profession: and it has therefore been the ideal policy of every wise and prudent people



ple to encourage it to the utmost. I call it *ideal* policy ; since as perfectly as its importance has been known, it has not always met with that care and attention its worth requires : and the great political management in states where manufactures and agriculture are both encouraged, is to give due attention to both, but in every circumstance to see that the wrong scale does not preponderate.

To enter into all the political reasoning which has so long been employed on these topics, would be only to repeat what has been said a thousand times before. This is far from being my design ; but I apprehend the subject far, very far from being exhausted ; and without treading in the exact paths of preceding writers, I think I can point out some circumstances which have been omitted ; and others not duly considered by them.

To ask one question which will be entering immediately on the subject : *Is there any profession or business which ought to be advanced to the height it is capable of, before others are encouraged which draw off the working hands from the former ?*—The affair

is clear, precise and determinate : agriculture, that *greatest of all manufactures* *, ought to flourish to the full cultivation of the land, before what we commonly call *manufactures*, take place as articles of trade and commerce. And after cultivation is at its height, those manufactures ought first to be encouraged which work upon materials of our own growth ; and last of all, those which employ foreign materials.

As agriculture therefore is the first and most important of all business, and the foundation which supports manufactures ; let us enquire whether our agriculture is at present at that point of perfection to which it is capable of attaining. A transient view of the best cultivated counties will at once convince us of the contrary. If *England*, as it has been said, contains thirty-four millions of acres ; I have little doubt but fifteen of them are waste and uncultivated, that is, they are unimproved woods, downs, and commons.

Is it not therefore an enquiry worthy of the utmost attention, whether the most material object of our care is not the cultivation of those waste acres ?—and whe-

* Montesquieu.

ther all the hands employed in manufactures, &c. to the amount of those necessary for such culture, are not employed to the detriment of the state? Provided, if they were otherwise employed than they are at present, it would be in the purposes of such cultivation. The most impartial consideration of these points leads me readily to answer that all *such manufactures* are *prejudicial*.

The answer to this argument which I apprehend most likely to appear — is this : That the greatest part of that land I have called *waste*, is of more use to the public in maintaining sheep, and consequently numbers of people in manufacturing their wool, than it would be if turned into arable land : And likewise that manufactures in general employ hands useless to agriculture, such as old people and children.

That there is some appearance of reason in these replies, must be allowed ; but if absolute knowledge of the matter of fact experimentally founded, cannot be gained, as it never was yet, the reader ought to be satisfied with such certainty as the nature of the subject will admit ; and from its importance to the well-being of the state, every

one concerned ought to make these enquiries which are within his reach to satisfy.

As to the difference between land employed in the feeding of sheep, or raising cultivated vegetables; it is a point of such importance, and so very curious in the fair disquisition, that I shall not avoid endeavouring to explain it as far as I am able.

—One circumstance should be premised, which is, that a thousand acres of the poorest arable land ever employ an infinitely greater number of husbandry hands than a flock of sheep does. If we consider that there are very few sheep-walks that have not under the surface a stratum of marle, chalk, or clay; and that such manures dug, and spread on the surface, become a sure and lasting improvement when managed with knowledge and discretion, we must allow that a noble and extensive field is open for private and public gain, and the employment of a great number of the best hands which a state can possess.

This improvement has been carried to great perfection in several parts of the kingdom, and has answered very satisfactorily to those farmers that have had the
purse

purse and resolution necessary for the work. I have known a great number of such attempts on various soils, and do not recollect one instance of any failure owing to an inferiority of profit in land after being improved: but a general advance in the value of its productions and the profit made by the cultivator.

I know many instances of an advance of land from one shilling rent to eight, nine and ten, and this not on a small farm or two, but over a large extent of country.

The general run of sheep-walk land, when marled or clayed with judgment (which improvement costs at an average about three pounds per acre *) will produce in middling seasons three quarters and a half of barley per acre; two, two and an half, and three quarters of rye; and turnips to the value of about thirty shillings; the mean amount of these three crops may be about two pounds five shillings: the barley reckoned at sixteen shillings the quar-

* Sheep-walks may in some places be improved at a much cheaper rate, viz. where they are near *lime-stone*, and either coals, wood, or furze. Four chaldrons will generally be a full manuring for three crops, and may be burnt for 7 s. or 8 s. a chaldron. C.———
My ingenious friend should not forget that marle lasts *twenty* crops.

ter, and the rye at twenty-four. Deduct the expences on them, and let any intelligent person make the comparison between the profit and that of three years sheep-feed : It will be found to bear none. But then comes the manifest superiority ; by introducing these crops in regular courses of husbandry, they excellently well prepare the ground for artificial grasses sown with the spring corn—and, without having recourse to burnet or other newly discovered plants, I may safely assert that a judicious farmer will (by means of clover and ray-grass) maintain nearly as many sheep on three hundred acres (laid down in course for three years) as before were kept on a thousand. This assertion, which I venture on very good authority, surely is sufficient to conclude the argument in favour of tillage.—But there are yet other points to be considered.

Besides the superiority of the produce of the land when improved in grain, we are to consider, that a part of it kept constantly in tillage, will employ more hands than attending the original number of sheep and manufacturing their wool. The hands immediately employed by the farmer are considerable. Whereas one man (except

cept at the shearing) will take care of five hundred sheep. The employment also of wheel-wrights, black-smiths, harness-makers, &c. is of no small consequence. All this is supposing no sheep kept; but the circumstance of keeping nearly, if not as many as before, alters that case greatly.

I have stated the improvements as commonly managed. But the practice of some small tracts of country which I have viewed, is I am persuaded of more private as well as public advantage, in yielding a greater produce, and employing more husbandry-hands. It consists in letting the artificial grass (generally clover) remain only one year on the ground; adding to the other crops, carrots, and so in five years reaping rye, barley, carrots, turnips, and clover; keeping no flock, only fattening cattle.

I am perfectly well satisfied that the case as I have stated it, is much under the truth; for it is incredible what noble crops of corn are raised on improved sheep-walks. Half the county of *Norfolk*, within the memory of man, yielded nothing but sheep-feed; whereas those very tracts of land are now covered with as fine barley and rye as any in the world—and great quantities of wheat besides. I have
often

often in that country seen fields of wheat of five quarters per acre, and six quarters an acre of barley are common: all those light lands in wet seasons yield prodigious crops. A prospect far different from flocks of sheep wandering over the fluggard walks, followed each by their one shepherd with a boy and a couple of dogs! Think of the wealth such a cultivation as I have hinted at, pours into the kingdom! Think of the employment given to the best hands a kingdom boasts! Think of this improvement; and then behold in the same country as many sheep as ever!

It is in this place necessary to take notice of an argument used in favour of uncultivated lands, or rather an instance of their value, brought by a late author, but without fairly naming the place. The passage alluded to is the following:

“ One single act for inclosure has destroyed 11000 sheep, all breeding stock from off one ground, within the county of *York*; and, of consequence, has taken away the employment of 600 manufacturers; and in the nine years will prevent 80,000 sheep from coming to the shambles: but probably within that time may draw 20,000 pounds out of the public

lic treasury in bounties, for sending the produce of corn abroad; and wounding this country in the most sensible manner. A barbarous policy this! and such a one as our forefathers of any preceding generation, for two centuries past, would have looked upon with resentment; but now unhappily adopted as a laudable and prudent measure in this. They encouraged and supported our woollen manufactory with the wisest laws human prudence could suggest, from a clear conviction, that the prosperity of the nation was connected with it; and their policy has been justified by fact: it having attained (in consequence of those measures) a degree of strength and opulence unknown to former ages.*”

Without enquiring what tract of country this is in *Yorkshire*, I shall suppose it matter of fact, and take it as this writer states it. Formerly it was a sheep-walk, and now, it is evident from what he says of its drawing a bounty on exported corn, it is a cultivated corn country. He says, it maintained 600 manufacturers.—I desire to be informed how many people it main-

* *The Occasion of the dearth of Provisions.* By a manufacturer. p. 22.

tains at present—but that piece of information makes not for his argument, and consequently finds no place in it. What a childish enquiry into the expediency of any measure, is it, to state the case *as it was*, and not likewise *as it is*, and draw a comparison between the two! It is to be considered what vast employment the very inclosing gives, and afterwards the constantly keeping the fences, gates, stiles, bridges, &c. in repair; then likewise comes the employment of converting the wastes into arable farms, the variety of buildings necessary, the numbers requisite for tillage; and last of all, the number of manufacturers; for as I have already remarked, a very considerable number of sheep may always be kept, and if (as in *Norfolk*) the turnip husbandry is introduced, the manufacture of hides encreases amazingly. All these circumstances outweigh the 600 manufacturers of wool, who can by no means be compared either in meer number, or in progressive population, to the vast superiority of employment arising from the inclosure; and as to the 80,000 sheep in nine years, it is a meer matter of multiplication; if the tillage is superior in one year, it is proportionably in nine.

The

The author mentions just before the above passage, clauses in acts against putting sheep into the new inclosures for nine or eleven years——the only consequence of which, is a variation in the farmers management during that time; consisting of throwing turnips oftener into the courses, or fallow years, and sowing the less clover and ray-grass: we may lay it down as a maxim, that the farmers will not lose by this, they will adapt their husbandry to this temporary circumstance, and instead of the production of sheep, will produce an additional equivalent, either in black cattle, cows, or corn. In either case, (sheep kept, or not) the land is converted to an infinitely superior use, by being cultivated.

A tract of waste land maintains 11,000 sheep, and 600 manufacturers; the landlords, we will say, know no further of it; but reside at *London*, possibly, and spend scarce a shilling on this uncultivated country. They get an act for inclosing it. What a different view it immediately exhibits! A very great part of their income is spent on this waste soil, the whole neighbourhood is benefited, vast numbers of poor people are set to work, at hedging,
 5 ditching,

ditching, and planting——farm-houses, barns, and offices are built——the makers of all kinds of implements of agriculture employed, and where there were formerly one person at work, in consequence of sheep, twenty will be regularly kept by tillage. What a prejudice therefore is it, to think one moment that a sheep-walk is preferable!——But the drawing 20,000 l. out of the public treasury, in bounties on the exportation of the corn produced on this sheep-walk, seems much to hurt this writer; whereas, it is of all other pieces of policy, that which least deserves the name of barbarous, as will fully be proved in my next letter, since the body of manufacturers are most indubitably more obliged to that measure than to any ever framed; at least if causing a cheapness of bread, is to be considered as a benefit.

In the latter part of the above quoted passage, a policy contrary to the present is said to have advanced the woollen manufactory to a degree of strength and opulence unknown to former ages; from which we are to gather that the woollen manufactory has been on the decline ever since

the bounty was given, in 1688, which is contrary to fact; but if the writer should assert this to be the case, then I would desire to know in what manner the prosperity of manufactures depends upon the cheapness of provisions, as wheat, the principal of all, has been regularly cheaper *since* the bounty.—To enter further into an answer to this sentiment would be to anticipate my subject; a clear state of the facts and consequences, with all their combinations, is the best answer, even to particular assertions. To return:

The second part of the objection to breaking up sheep-walks, viz. the employment of old people and children in the manufacture of wool, surely falls to the ground if my foregoing reasoning is good. For if the same number of sheep is not kept by the ground in an improved state—if there would be a certain number of such hands thrown out of their employment—the increase of tillage would take some, and the trades dependent upon it, many: For it is a mistaken idea that agriculture finds no employment for such. In the villages with which I am acquainted, the farmers employ all boys, that can earn four pence a day
by

by spinning; indeed it is very rare to find one at that work that earns three pence; and as to those very little children and old people who at present spin, they would most undoubtedly meet with as good work then, considering the vast number of sheep which must always be kept, let tillage be ever so flourishing.

And here, it may not be amiss slightly to consider the different employments children and old people meet with in a farm perfectly cultivated, or but indifferently so. Weeding—picking off seed-corn—frighting vermin—planting pease and beans—slicing and dropping potatoe-setts,—gathering potatoes,—with an infinite variety of other business, will, in a large farm, perfectly well cultivated, yield far more such employment, than one managed in the slovenly way too often seen.

Having, as I think, sufficiently proved that it would be the most political conduct to turn all the commons and sheep-walks in the kingdom into arable farms; and there being, as I have observed, fifteen millions of acres of such; the next enquiry ought to be, whether we act rationally in giving the least encouragement to manufacturers
(always

(always considering them in two lights, one working on our own productions, and the other on foreign ones) until such waste lands are duly improved and converted to the uses of arable farms?

Let us consider the difference between a number of men employed in manufacturing a foreign production—Silk, for instance—and the same hands employed in breaking up, and cultivating tracts of unimproved land. I am aware that it will at once be remarked, that we must purchase of foreigners (with money possibly) those very manufactures which we at present make amongst ourselves. The query therefore is, Whether it would not be more advantageous to employ the hands in the cultivation of the earth, and if we must have those manufactures, purchase them with the value of the earth's products? supposing the amount of each the same. Or, in other words, whether a thousand men employed in manufacturing a foreign commodity are of equal value to the State as the same number employed in the arts of agriculture?

Here it must be remembered, that *One million's worth of things vendible, being produc-*
C
tions

*tions from our earth, and raised by our own hands at home, will, when exported, bring a nation more real gain, than the sale of three millions worth of goods in manufactures, provided the materials manufactured are purchased from abroad.** From hence it appears that there is a balance of *three to one* in favour of the productions raised by the hands in question on our uncultivated lands, superior to the manufactures they work upon, in value to the State.

And that this superiority is real, and branches out to a variety of other interests, is manifest if we consider the difference in *stability* of a commerce founded on the *necessities* or *superfluities* of life. The demand for corn will always, in every human probability, be more regular and certain than that for silk or any other elegant manufacture; our present experience teaches us this fact, since of all the branches of our extensive trade, none is so universally beneficial as that of corn. *England* in five common years, namely from 1745 to 1750, shipped off in grain of all sorts, to the amount of 7,405,786 pounds sterling,

* *Essays on Husbandry*, p. 25.

which,

which, as has been observed before, is equivalent, in national advantage, to 22,000,000 raised by manufactures exported, when *the materials are not our own production*. The infinite importance of such a trade must appear from hence sufficiently striking. Such a vast demand for our corn, having so long continued an almost regular trade, we ought surely with all imaginable attention to encrease the culture, not only to enable us to continue, but even encrease the quantity exported, as an increase of the growth will be attended with a falling in the price, which will consequently add to the permanency of the commerce, by inducing foreign nations rather to buy their corn of us than to cultivate it themselves.

That this is a probable consequence may be inferred from the constitutions, customs, manners and religion of several countries in Europe, which are unkind to the cultivation of the earth; and so opposite to that general freedom which is the life of agriculture, that it may be a measure more easy, sure, and ready to purchase corn of us, than to go about the great business of cultivation themselves. Does it

not therefore behove us greatly to take especial care of their being sure in their dependance on us, and not, when their day of scarcity comes, refuse them such a necessary of life.—No; not on any consideration; for it is not to be imagined that the loss is only during the time we think proper to prohibit our exportation: we should be lucky indeed if the extent of our loss was measured only by the period of our own prohibitions.—Much greater reason have we to expect that such people, disappointed in so necessary an importation, will either go all lengths to raise a sufficiency, (and wherever that is the case *more* than a sufficiency) or turn their eyes to some wiser people for a supply *.

Now the enabling ourselves to supply foreign nations in a regular and sure manner, and also keeping the price of corn at a *pro-*

* Sir James Stewart speaking of the management of a truly political statesman, says, "He must at the same time continue to give proper encouragement to the advancement of agriculture, that there may be constantly found a surplus of subsistence, (*for without a surplus there can never be enough*;) this must be allowed to go abroad, and ought to be considered as the provision of those industrious hands which are yet unborn." *Enquiry into the Principles of Political OEconomy*, Vol. I. p. 268.

per height, can only be effected by *fully* cultivating the earth, before hands are suffered to be employed about any manufactures but what are absolutely necessary—I say *absolutely* necessary; since those between which and agriculture there is a *mutual* dependence, will relatively be encouraged by advancing agriculture*.

There is not only a great superiority in the value to the state of the productions of the earth raised, for instance, by a thousand hands——over the manufactures wrought by the same number on a foreign commodity; but those employed in agriculture will find a more sure and regular dependance on their business than any manufacturers can. Popular riots, insurrections, and complaints are infinitely more common amongst the latter than the former; which, *when founded in reason*, are very plain proofs, that they do not meet with such constant work as their regular

* M. Bertrand with very great justice therefore lays it down as a maxim, that, *Aucune manufacture ne doit être établie aux dépens de l'agriculture & de la culture du blé en particulier. Ce principe a été établi par des argumens invincibles en divers endroits du recueil de la Société Economique de Berne. Essai sur L'Esprit de la Législation.*

maintainance requires. At some particular times their earnings may be considerable ; but such irregular advantages amongst a set of men, remarkable for spending in one day the wages of three, (when in one day they can earn the pay of three) is of very little use to themselves, their families, or their country. Whereas the people employed in agriculture are equal in their earnings ; their pay is small, but then it is constant——they are not flung out of work for a single day——nor do they, except at stated regular times, like harvest, earn enough in one week to make them lazy for three ; and as these beneficial seasons come so regularly, they are seldom attended with the ill consequences so remarkable in the other case. The labourer's pay is low during winter, it rises gradually to harvest, and then sinks again, but not immediately ; and this variation is not owing to any accidental cause, but comes regularly with the seasons. Any such sudden change as a mourning on the one hand*, or an unexpected

* Depuis que le commerce est devenu la base de la puissance politique, l'industrie générale éprouve continuellement des grandes révolutions. La liaison que tous les états de l'Europe ont ensemble, fait qu'une guerre

pected demand for goods on the other, never starves him with the total want of employment—or on the contrary, pours a tide of money on him pernicious in every consequence*.

The striking corollary to be drawn from these particulars surely is this: *Never to obstruct or in any measure discredit the sale of the cultivator's products in favour of the people*

guerre qui est à deux cent lieues d'un continent, suspend les arts & les manufactures d'un autre. Alors une foule d'Ouvriers est sans travail, & par conséquent, se trouve reduite à la mendicité, sans que ces fondations dont nous venons de parler puissent remedier à cet inconvenient. *Les Interests de la France mal entendus*, tom. 3. p. 302.

* The best politicians are sensible of the great value of this class of inhabitants. Si l'on demandoit quelle portion de ses hommes un etat doit donner à la culture des terres, on pourroit presque repondre que l'excès n'est point à craindre dans cette profession: *Remarques sur les Avantages et les Desavantages de la France et de la Grand Bretagne*, p. 20. On ne pourroit donc décrire dans un trop grand détail le nombre des laboureurs dans chaque Paroisse, le nombre des mariages, leur fécondité, la durée de la vie de ces hommes précieux qui exercent l'emploi le plus nécessaire, le plus penible, & le moins payé, de la société; l'humanité & l'intérêt générale concourroient unanimement à leur faire un fort doux & aisé: l'état en seroit récompensé par l'augmentation de ses richesses en hommes & en productions. p. 291.

employed in manufactures. Enabling our manufacturers to sell their goods cheap to foreigners, is undoubtedly a wise measure—but it ceases to be such, when effected (supposing it ever was) by cramping the sale of the produce of our lands*: Because more than we gain by one measure we lose by the other. But constant experience evinces that whatever increases the sale of a production, likewise increases the quantity of it; therefore if we would have bread cheap for our manufactures, we should suffer the exportation of corn to be constant and unobstructed.

I have hitherto spoken of manufactures rather in a general sense, and but slightly distinguished between those which are worked up from our own productions, and such as are wrought from foreign ones.

* Although manufactures, arts and commerce, says M. Carard, well directed serve to vivify agriculture, nevertheless a bad politician might easily render them pernicious to his country, by depriving it of those hands it most wants. If he sacrifices the cultivators to the traders; if for rendering labour cheap, he cramps the former in the sale of their commodities, they become disgusted at their culture, and are transformed for the most part into domestics and miserable artizans. *L'Esprit de la Législation pour encourager l'Agriculture.* Bern. Mem. 1765. Vol. 2. p. 263.

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What proportion the number of hands employed in the last year, to the number necessary to *complete* our cultivation, I cannot precisely assert: But if they were all employed towards perfecting such cultivation, I have reason sufficient to believe their labour would be attended with an infinitely greater benefit to the public *.

As to those manufactures which are wrought from our own products, reason at once tells us that they are of infinitely greater value to us than the others. This is a maxim so self-evident that it needs no

* Several French writers are sensible of the ill consequences resulting from pushing manufactures too far. "Because our manufactures of gold and silver stuffs and laces yield a living to a great number of workmen; because they employ our genius; because they excite the admiration of foreigners; because they irritate luxury; because they occasion a certain consumption; our administration see nothing else. Nevertheless the amount of the evils they cause the public to feel is much more considerable than the good they procure. 1. They cramp all other branches of industry. 2. They occasion a great number of subjects losing sight of necessary professions; which they entirely abandon. 3. They cause a general dearth in consumption, because this industry is better paid than any other. 4. Lastly, they consume great quantities of gold and silver, which circulated thro' our finances, would augment the power of the State." *Les Interets mal entendus*, tom. 2. p. 226.

proof.

proof. The chief of these are wool and leather. And here it is worthy of observation, that our most valuable manufactures are so very nearly connected with agriculture, as to depend on the farmer for their very being. I have already drawn part of a parallel between a sheep-walk remaining for its old purpose, or converted into an arable farm; from whatever knowledge I can gain on the subject, there is the clearest certainty of the superior value of the latter :—that is, the value of the productions of the farm in corn, neat cattle, &c. added to the quantity of wool which it will yield in its improved state (supposing fewer sheep are then kept, which I have no reason to believe is the case) is altogether a source of infinitely greater public and private wealth, than the same land occupied solely in feeding sheep. And yet how many times has the measure of breaking up sheep-walks been censured by men whose intelligence one might have thought better founded?

As to the other manufacture, that of leather, it is well known the quantity of hides would be greatly increased from the consump-

consumption of turnips, straw and hay, above what would be necessary for winter provision for the sheep.

Wool has been so long supposed the sacred staple and foundation of all our wealth, that it is somewhat dangerous to hazard an opinion not consonant to its encouragement. But if the cultivation of the land and the manufacture of wool should come in competition; the former ought to be encouraged in preference. But be it ever remembered, that the wise policy in all cases is to *harmonize* agriculture and manufactures—and if *one* is in need of encouragement, it ought ever to receive it *if possible* without prejudicing the *other*.

In respect to the different importance of the produce of corn and the manufacture of wool, another circumstance ought not to be omitted, which is, that corn finds a more regular and constant sale than cloths—that foreign nations make greater advances in manufactures than in agriculture, owing perhaps to the *former's* flourishing better than the *latter* under arbitrary governments. That we have lost the trade of cloth to *France*, owing to the manufacture at *Abbeville*; and are declining
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in many other places where agriculture is not encouraged equally with their manufactures. All people must eat bread, and if they are wanting in that wise policy of providing it in preference to clothing, we shall, to our glorious advantage, find our profit in supplying them with the one, how soon soever we may be beat out of the other;—*provided* the contrary event does not arise from the want of a regular and perpetual exportation.

In these affairs the example of *France* ought to deter us from a rage in favour of manufactures. I shall copy here the words of a true politician *.—" *Colbert* rather depressed than promoted the interests of *France*, when he conceived a project of enriching it by establishing a vast number of manufactures; flattering himself at the same time, that by making the productions of his manufactures subservient to luxury and falsely refined elegance, he should multiply the wealth of his own nation by supplying and feeding the extravagance and vanity of other nations; *but some part of the folly happened to stick where it took its rise, and became infectious at home*; which shews that luxury is an unfortunate fashion in

* *Harte's Essays on Husbandry*, Essay I. p. 179, &c.

any country, though at the same time it prescribes the mode to foreigners, and induces them to purchase such merely ornamental elegancies as are the workmanship of our own artists. Under the idea of hoarding up great quantities of provisions for the support of his workfolks, (*and that principally by obstructing the free vent and exportation of corn*) this minister had the applause of the poor, who naturally favour any scheme, real or imaginary, that promises to lower the price of bread; for their understandings can rarely see deeply into the truth of things, any more than the advantage of a nation in general, or of themselves upon the whole. In like manner the historians and poets loaded the prime minister with panegyrics, as the true father of the people, and made no ceremony to depreciate the wiser conduct of *Sully*. But alas! it never truly appeared that trade and commerce, even in their most flourishing state, enriched a kingdom like the solid revenues that proceed from a right and effectual cultivation of the earth. Thus, though the *French* nation was intoxicated with the hopes of immense riches, and though they supplied all Europe with silks

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and

and embroideries and expensive trifles, yet the fund of real wealth was deficient at bottom, *Famine made its appearance frequently and almost periodically* *. The proprietors of landed

* “ Heretofore, says a *French* author, the *English* complained that *France* poured in a prodigious quantity of grain upon them, and were themselves surprized that this commerce did not diminish her riches, nor the immense abundance of her consumption. The great *Colbert*, less foreseeing than *Sully*, believed that he favoured the state, by prohibiting the exportation of corn. But the same edict which prevented the farmer from disposing of his crop to his mind, occasioned his sowing the less: from thence arose the frequent famines, which in succession afflicted by turns the several provinces of *France*, even the most fertile. *Colbert* could not persuade himself that the liberty of exportation, procured a prodigious importation of grain; the one nevertheless resulted from the other. The merchant, who had entire liberty in this article, found, for instance, that corn was cheaper at *Dantzick* than in *France*; he brought it from thence and deposited it in the maritime cities of the latter, ready for a market in *Spain* and *Portugal*. But if, in the mean time, he found that the crop of a province had failed, his corn immediately supplies the place, for finding a profit in selling it at home, he freely accepts it without running any new hazards. If on the contrary, all the provinces have an abundant crop, they find an easy method of selling the surplus, by which means the corn is prevented from falling to so low a price as to discourage the cultivator. I think that a total liberty of importation and exportation of this commodity would now procure the same advantage, but I am certain it ought not to have the least duty upon it. This is the single means of re-establishing a competition with the *English*.” *Richesse de l’Etat*

landed estates (for they with others at first ran into the universal notion of admiring the project) thought themselves very happy, after a considerable tract of time, to advance their rents a *sixth* part, though money bore *one third* a greater value than before : Imposts and taxes were increased immoderately : And a considerable part of the lands (not being found, or, at least, not believed to answer the expences of cultivation) was overlooked and neglected by little and little, and, at length, degenerated into waste and desolated tracts of country. All which may suffice to shew,

l'Etat a les Pieces qui ont paru pour & contre 1764. p. 278. Idées d'un Citoyen sur l'Administration des Finances du Roi. An apology by some may be thought necessary, for introducing so many quotations from *French* authors ; but the reader will please to consider, that there is at present in *France* a set of political writers, whose works are really admirable ; and if we may judge by the present plan of domestic policy pursued by the ministry, there is great reason to believe it actuated by their advice, for many of their best projects have of late been executed. This circumstance, and their being hitherto untranslated, will, I apprehend, plead my excuse. Amidst a deluge of translations of romances and frivolous pieces, it is amazing that this nation of politicians has not called for those writings of the *French* patriots, and especially on the subject of encouraging agriculture, which have made so great a noise in divers parts of *Europe*.

that the cultivation of the earth ought not to be superseded by a passion for commerce *."

The point of balance between agriculture and manufacture must be considered in another light. It is supposed, that stopping the sale of the earth's productions is an encouragement to our manufactures:

* Monsr. de *Boulainvilliers* has a stroke or two which give a very just idea of *Colbert's* ministry. "*Colbert*, says he, to whom *Lewis* confided the care of augmenting his power by an augmentation of commerce, raised his edifice before he had laid the foundation. He saw the grandeur of the monarchy through the medium of manufactures, whereas he ought to have viewed them through the medium of primary materials. He fixed his attention too much upon the arts, but never considered agriculture enough. If I may be allowed the expression, he was always fabricating, but never creating. His genius possessed every part of the detail, but he had nothing of the great legislator. He was sunk in minutiae, and never rose above their sphere. The manufacturer absorbed the minister. The fabricator carried away the statesman. Urged by reputation, he would finish his work, at a time when his real glory was to commence. In spite of his high reputation (a reputation acquired by all who make great changes in a government) he projected none of those great strokes of State, or, as it is better expressed in the *French*, those *coups d'état*, which decide the fortune of a nation. In his system he moved in a beaten rout, but never struck out a path of his own." *Les Intérêts de la France mal entendus*, tome 2. p. 265, 266, 267.

I think

I think I have already proved, that was the effect such as is supposed, it would be a most impolitic measure. But I shall now offer a few considerations to display the falsity of the expectation—and venture to assert that the lowering the price of provisions is of no use to our manufactures. This is a very fruitful subject, and would admit of many reflections of the utmost importance on the good of manufactures in general; but I shall be short in what I have to offer on this head, as the matter has been handled in a very sensible manner already*.

We should, in the first place, take a view of populous manufacturing countries, and observe if provisions bearing a high price adds to the dearthness of their manufactures. Amongst such people, the *Dutch* hold the first rank. Now it has been asserted†, and it seems on perfectly good authority, that a *Dutch* manufacturer pays near a third of his earnings in taxes—an *English* manufacturer not above one tenth.—Again; such bread as the *English* manufacturer eats, the *Dutchman*

* Considerations on Taxes, 1765.

† Ibid.

must pay three pence per pound for, and buys his flesh at nine pence per pound. And if the prodigious national debt of *Holland*, which, with the standing expences of the state, &c. occasion a vast variety and height of taxes, was not attended with this effect, it would be very strange: Nor should we forget the small quantity of their land, with their numerous inhabitants, as a contrast which greatly adds to the price of provisions. Nevertheless, great as the price constantly is, loaded as they are with taxes, the *Dutch* manufacture the products of a variety of countries, and afford them at a lower rate at market than any people among whom the necessaries of life are cheaper. Hence Mr. *Locke* long ago observed, that the frugality and industry of the *Dutch* were so great from the high price of provisions, that they would buy our rape-seed, make it into oil, and sell it cheaper than we could.—Notwithstanding the vast weight in expences of food and taxes under which the *Dutch* labour, yet their daily pay is not above fourteen pence.

The same circumstances may be observed in *France*; the price of bread there is often six times above its average; and as

to their taxes, they are collected in so burthenfome a manner, and fall in such an infinitely heavier proportion on the poor people, than on any class in the state, that their amount must be considered as far greater than ours. Nevertheless, labour is there three times as cheap as with us; by which means the *French* are enabled to undersell us in all markets where there arises a competition*.

Now, on the contrary, take a view of those countries where the necessaries of life are extremely cheap, and it will invariably be found, that such countries are neither so well peopled nor do manufac-

* The point which I here aim at proving, has been the opinion of the most sensible politicians. Sir *William Temple* says, "In order to advance the trade of *Ireland*, provisions must be rendered so dear as to enforce general industry." *Works*, Vol. 1. p. 114. Sir *William Petty*, Sir *Josiah Child*, Mr. *Polixfen*, Mr. *Gee*, and others, have all concurred in the same observation, viz. that trade can never be greatly extended where the necessaries of life are very cheap. The author of the *Vindication of Commerce and the Arts*, says, "The reason why commerce seldom flourishes in a fertile country thinly peopled, is because land being there of small value, from the scarcity of inhabitants, provisions are cheap and plentiful, and labour dear."—See also Dr. *Franklin* in his *Observations concerning the Increase of Mankind*; and Mr. *Locke*. *De Witt* says, "That high taxes promote invention, industry and frugality."—*Consideration on Taxes*, p. 29.

tures flourish amongst them. This fact is too well known to require illustration.

As these circumstances are very speaking, and as the example of our own country adds to the proof, it is worth inquiring into the reasons of them. They are supported by the concurrent testimonies of variety of times, nations, and authors; it is a certain fact that manufactures never flourish in countries where bread, and consequently other provisions are very cheap.

There is not a more common argument than pleading for the necessity of supplying our manufacturers with provisions cheap, that they may afford to work cheap, and their masters to sell cheap: This chain of conclusions is so obvious and natural, that it is at once taken upon trust, and considered, contrary to all experience, as matter of reality. But the truth is, workmen work to live; and if four days earnings are sufficient to maintain them six, they will be idle the remaining two. This, beyond all doubt, is the reason for the foregoing asserted facts being true. There is not a more pernicious evil to manufactures than idleness among the workmen: if they spend a day or two in
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the week without work, it hurts them when they do work—their labour during the time is lost to the state—and cheapness of living enables them to treat their masters in a manner not to the service of the business in general: On the contrary, when provisions are so dear that they are obliged to stick close to their work for a maintenance, the trade has the benefit of all their labour—and business goes on so regularly that the masters are enabled to supply the markets cheaper than when a great plenty allows the workmen to earn in a short time what will suffice for their maintenance during a longer. “ Those, says the author of the *Considerations*, who are concerned in the manufactories of this kingdom, know, by experience, that the poor do not labour, upon an average, above four days in the week, unless provisions happen to be very dear. When this is the case, a general industry is immediately created, the poor crowd about the houses of master manufacturers, begging for work almost at any rate :—The quantity of labour then offered tends to lower its price, and the populace work five or six days in a week instead of three or

four, because they cannot live by working less. The very reverse of this happens when wheat and other provisions are at a low price. Tippling houses and skittle-grounds are then crowded, instead of their master's court yard; idleness and debauchery generally take place; labour grows scarce, and masters are obliged to seek it, and court the labourer to his work. Experience evinces that this is the true, tho' melancholy state of the case; and from hence it appears, that the poor might live comfortably by working six days in the week, even though necessaries were taxed double to what they are at present."

It is a little remarkable that so many authors of credit should fall into the common opinion, that provisions being cheap, is an advantage to manufactures; from the deceitful conclusions mentioned above. M. *Danguelle* observes, that "The employment of men is augmented by consumption; consumption by a good market, which depends upon the price of work; which likewise follows the price of the necessaries of life*." And another re-

* *Avantages & Desavantages de la France & Grande Bretagne.* p. 293.

marks, that “ The natural plenty or scarcity of the products of the earth, necessary for the sustenance of life, determines the price of provisions, and the price of provisions determines the price of labour in every business and occupation whatsoever†.” Some of these writers, however, fall into palpable contradictions whenever they extend their combinations. “ Whatever raises the necessities of life, raises labour, and consequently every thing that is produced by labour §,” says one of them; and yet presently after remarks, when speaking of parishes being obliged to keep their own poor——“ So that *when provisions are cheap*, they won’t work above half the week, but sit or idle away half their time‡.” It would puzzle any one who advances these opinions to account how any circumstance which caused such idleness should lower the price of manufactures: And it is very observable, that the authors above quoted, do not enter into an examination of the principle they

† *Laws and Policy*, p. 13.

§ *Essay on the Causes of the Decline of Foreign Trade*, p. 6.

‡ P. 32.

advance, but take the matter upon trust and of course; the last speaks of it in different lights, and the least examination involves him in a contradiction from having adopted a general opinion, without a previous and attentive consideration.

Those who have taken the contrary side of the question, use arguments of a different nature, founded in facts and universal experience; for, besides the authors I have already quoted, others must not be forgot. One, speaking of *Birmingham*, observes, " In that town great numbers of women, children, and infirm persons, even most of those in the parish workhouse, having been engaged in the manufactures, the undertakers have reduced to a surprising degree the price of every article they have taken in hand. The people of *Geneva*, one of the *cheapest and most industrious places in Europe*, were beat by them out of the manufacture of enamelled toys, which they had for a long time monopolized; the founding, gilding, and laquering ornamental articles in metal, have been carried by them over all other places in a most extraordinary manner *." Now the price of

* *Museum Rusticum*, Vol. vi. p. 95.

provisions at *Birmingham*, if we will believe the discontented authors, has been much higher than abroad, from whence, according to their conclusions, *Geneva* should have gained the superiority, the contrary of which is the truth. Sir *William Temple* likewise, forming a comparison between *Holland* and *Ireland*, says †, “ For if we talk of industry, we are still as much to seek, what it is that makes people industrious in one country, and idle in another. I conceive the true original and grounds of trade to be, great multitude of people crouded into small compass of land, whereby all things necessary to life become dear, and all men who have possessions, are induced to parsimony; but those, who have none, are forced to industry and labour, or else to want.”—For a proof that land and maintainance, being cheap in *America*, and labour at the same time dear, see the *Observations concerning the increase of mankind, peopling of countries, &c.* Philadelphia, 1751. annexed to the *Interest of G. Britain, with regard to her Colonies*, p. 50, 51, 52, &c. all contrary to the common no-

† *Works*, Vol. 1, p. 69. fol. edit.

tions of *provisions cheap*,—*manufactures the same*.

From the foregoing facts and remarks, may we not justly draw some very important conclusions? Does it not appear, *First*, That agriculture is the true foundation of all the wealth which can flow into this nation—whether it be immediately from commerce or manufactures? *Secondly*, That we have vast tracts of uncultivated land, and much cultivated in an incomplete manner; and that our first, and most important business ought to be to advance the culture of the whole to the highest perfection. *Thirdly*, That this great improvement should take place before any encouragement is given to increase the number of manufacturers, it being proved, that, until such cultivation is complete, the generality of them are a prejudice to the state, in *that circumstance* of not being employed about the *most important concern* of it. *Fourthly*, That it is in the highest measure impolitic, in any degree or manner, to obstruct the free sale of the earth's productions, on a supposition that such a conduct will be of advantage to manufacturers,—or on any supposition
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whatever; since such management is proved very bad, from all experience.

These are the plain corollaries which appear to me naturally arising from a fair state of the foregoing case: I hope I have sufficiently proved the truth of most of the facts, and the great probability of the rest, from which I have drawn the above deductions.

L E T T E R II.

HAVING, as I think, my beloved countrymen, proved the vast and *superior* advantages of agriculture, I shall next examine some peculiar and striking methods of encouraging it,—and inquire into its present state. In this letter, I shall confine myself to that *great foundation of diversity of opinion*, the Exportation of corn.

In all such matters as these, it is much the most satisfactory method of treating them, to display, first, the facts (and luckily this subject will afford me many very remarkable ones;) and secondly, draw such conclusions from them, as readily arise from their nature.

The exportation of corn first received a bounty in the year 1689; and, as it has by many been thought to advance the price of wheat at home, by that means starving our own manufacturers to enable foreign ones to work cheap, it is, in the first place, necessary to inquire into this supposition, for common talk, or news-paper declamation, is
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of no authority when arguing against fact. The prices, &c. of corn I know have been published often before, but it is absolutely necessary to insert them here; I shall be as short in my abridgements as possible; but such facts are the foundation of every just argument that can be urged for or against any measure.

The following table, shewing the mean price of wheat at *Windsor* market at several periods, for one hundred and sixty-nine years, is what I shall first offer to the reader.

		Years	l.	s.	d.	Years	l.	s.	d.
From	1594 to 1612	19	2	2	5 $\frac{1}{4}$	}	69	2	8
	1613 to 1637	25	2	7	4				
	1638 to 1662	25	2	15	8				
	1663 to 1687	25	2	5	3 $\frac{1}{2}$	}	25	2	5
	1688 to 1712	25	2	8	5 $\frac{1}{2}$				
	1713 to 1737	25	2	0	7 $\frac{1}{2}$				
	1738 to 1762	25	1	18	2 $\frac{3}{4}$	}	75	2	2

By this it is evident, that wheat has been cheaper the last 75 years, since the bounty commenced, than it was for ninety-four years before. It is farther observable, that for the first sixty-nine years, the price of wheat was continually rising, and
since

since the bounty was given, it has been continually sinking; which seems to be a plain proof that this sinking of the price was owing to the bounty. The twenty-five years from 1663 to 1687 are stated separately; because in that period a duty was first laid on the importation of corn; which, with two additional duties afterwards, amounted almost to a prohibition; the consequence of which is here visible in the price, for wheat, which for many years before was rising, did at this time sink more than ten shillings a quarter*.

Notwithstanding the plain evidence of these facts, yet a late writer has ventured in a very hardy manner to call suppositions of the bounty reducing the price at home, *vulgar errors*, and to deny the truth of it from these very tables; his reason is, "That wheat was 17 s. 9 d. $\frac{1}{4}$ per quarter dearer during the first ten years after the bounty took place, than it was during the ten years preceding it†."—In the first

* See E. S.'s very sensible letter, *Museum Rusticum*, vol. vi. p. 22.

† *The Occasion of the Dearness of Provisions, by a Manufacturer*, p. 12.

place,

place, the assertion is false, for the average price from the year 1679 inclusive to 1688 inclusive, is 2l. 3s. 1d. and from 1689 to 1698 (and not throwing out the year 1690, as the author does for no reason, but its being accidentally a low one) is 2l. 12s. 11d. the difference is only 9s. 10d. which is little more than half what he says; and even if the year 1690, *is* thrown out, the difference is only 13s. 3d. so that accuracy is none of our author's perfections. In the next place the preceding ten years happen to be part of the twenty-five thrown by themselves in the above table, on account of a duty being then first laid on imported corn, which, as I have observed before, had a visible consequence in sinking wheat more than 10s. a quarter. There could not therefore be a more mistaken way of stating the effects of bounty, which certainly deserves to be considered as it appears in the variation of prices exhibited in that table.

It is impossible that a stronger proof than this should be advanced, of the certainty of the assertion I made before, viz. the exportation of corn gives plenty, and
confe-

consequently cheapness at home ; and now I may add, that preventing our receiving any from abroad is attended with the same effect.

These facts bear so much the appearance of paradoxes, that I have heard numbers laugh in ridicule at the very mention of them : and the poor of this country treat them with a scorn which sometimes breaks into riots. Yet strange as the mere assertion may sound, the proofs of the truth of it are so clear and self-evident, that the wonder is it should ever be thought paradoxical.—But farther——

The

The fourteen highest annual prices of wheat *before* the bounty was given, are as follows.

l.	s.	d.
3	9	6
3	8	0
3	13	8
4	5	0
4	0	0
3	16	8
3	13	4
3	5	0
3	6	0
3	10	0
3	14	0
3	8	8
3	4	8
3	0	0
49	14	6
Aver.	3	11 0

The fourteen highest prices *since* the bounty.

l.	s.	d.
3	7	8
3	4	0
3	11	0
3	0	0
3	8	4
3	4	0
3	18	6
3	18	0
3	0	0
2	13	0
2	14	0
2	14	6
2	11	0
2	10	8
43	14	8
Aver.	3	2 5

Last period cheaper }
than the first by } 0 8 7

This inferiority of price is a sufficient answer to those who assert, that such a prodigious exportation as we sometimes carry on, when the crop abroad fails, raises the price in some particular years to a height unknown before the bounty, and intolerable to our own poor.

But there is another circumstance not to

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be forgotten, which is clear, striking, and decisive : the price of all other things is advanced a fourth part within these hundred years ; owing, in some measure, to a vast extension of commerce, which has rendered money so much more plentiful than before ; but probably in a much greater degree, to the infinity of our paper currency. Therefore the foregoing prices do not discover the *real* sinking of that of wheat, unless we deduct from every year the proportion of the rise of the price of other things : this will display the vast plenty of corn, which the exportation has given to the nation, for nothing but such a plenty could be attended with a constant lowering of the price.

This fact is so very clear and evident, and the conclusion, *that it is all owing to the exportation*, so very natural, that the reader is desired never to forget the certainty of it ; nor, whatever seeming contradictions there may appear between the *quantity* exported, and the greatness of the *effect*, ever to doubt of this first fact and foundation of all our reasoning : it is so very *sure* that he needs not be apprehensive of giving total credit to it.

As

As the exportation has been of this great advantage to the state, let us next enquire into the immediate profit of it, arising from the sale of the corn. Of this it will not be at all difficult to lay before the readers of these letters, a very clear, satisfactory, and authentic account. The registers of the quantity exported, which were laid before the parliament, extend no further back than 1697; I shall therefore insert the extracts I have copied from that year*.

ACCOUNT of CORN EXPORTED from
1697 to 1765.

From 1697 to 1706, 9 Years.

Grain.	Quarters.	B.	Value.
Barley	251,689	7	207,644 2 11
Malt	623,345	4	374,007 6 0†
Oatmeal	2,015	4	2,494 3 7
Rye	238,985	7	288,777 0 3
Wheat	552,867	2	1,002,071 17 9
	1,668,904	0	£. 1,874,994 10 6

From

* See *Three Tracts on the Corn Trade and Corn Laws*,
P. 133.

† It was an omission in the first edition of these Letters, not to add an explanation of the price here charged

From 1706, to 1726, 20 Years.

Grain.	Quarters.	B.	Value.
Barley	433,237	2	404,354 15 4
Malt	4,381,205	0	2,628,723 0 0
Oatmeal	11,922	0	16,690 19 6
Rye	789,618	6	931,092 2 2
Wheat	2,518,213	4	4,448,843 17 0
		8,134,196 5	£. 8,429,704 14 0

From 1726 to 1746, 20 Years.

Barley	590,080	6	523,696 13 3
Malt	3,871,332	4	2,322,793 10 0
Oatmeal	45,932	3	61,051 15 4
Rye	520,020	6	517,853 19 11
Wheat	4,461,337	4	6,654,828 8 9
		9,488,703 7	10,080,224 7 3

for malt, which I shall copy from the same author, page 115. where "The price of barley is said to be the same as that of malt, deducting 3s. 7d. per quarter for making: which is however to be understood of that made for home consumption only; for, by statute 3 G. 2. c. 7. sect. 14 and 15. three quarters of malt is to be allowed for every two quarters barley, when malted for exportation, and the bounty is paid accordingly. Now two quarters of barley having been worth, on the average, only 36 s. we ought not to suppose three quarters of the malt set down in the said account as exported, worth more, *i. e.* 12 s. per quarter."

From 1746 to 1765, 19 Years.

Grain.	Quarters.	B.	Value.
Barley	1,268,088	1	1,157,130 8 9
Malt	4,777,303	6	2,866,382 5 0
Oatmeal	67,186	4	91,821 11 0
Rye	939,580	7	990,474 16 11
Wheat	6,800,017	1	10,766,693 15 7
	13,852,176	3	15,872,502 16 9

T O T A L S.

Years.	Quarters.	B.	Value.
9	1,668,904	0	1,874,994 10 6
20	8,134,196	5	8,429,704 14 0
20	9,488,703	7	10,080,224 7 3
19	13,852,176	3	15,872,502 16 9
68	33,143,980	7	£. 36,257,426 8 6

If these totals are not sufficient to open the eyes of every person prejudiced against the exportation of corn, I know not what will. Think of the vast number of hands the raising these thirty-three millions of quarters employed! Think of the number of sailors the shipping (all our own) employed, which carried out this corn! The very freight of which amounted to above three millions sterling. Think, therefore, my countrymen, of one branch of our exports, bringing in *forty millions* sterling! This forty, as I have elsewhere observed, is

of an equal value with *one hundred and twenty millions* worth of *manufactures exported, if wrought from foreign materials*. These are facts which speak like a trumpet in favour of this noble and truly beneficial measure, which is the foundation of our national wealth, not only in the mere amount, however considerable, but in an infinite variety of interests affected by it,—and the most certain resource we can ever depend upon.

It is eagerly remarked by those who will not allow that the exportation of a commodity increases it, that it is impossible so immense a quantity as thirty-three millions should have been exported, and yet the quantity at home been on the increase. But such people do not sufficiently consider how much a lively demand and quick sale encourage the cultivator to proceed in his business with spirit and alacrity; new ground is broke up, and the plough triumphs! But as these assertions do not satisfy prejudiced people, who are alarmed at the *largeness* of the *whole*; I shall here shew them how small a proportion the exportation bears to the whole growth.

The

The ingenious author of the *Essays on Husbandry* reckons the arable land of the kingdom at fifteen millions of acres. "From these fifteen millions," he goes on, "we will deduct a third part for fallow-land each year, (Note: *we are sensible this allowance is too great in fact, but it is what ought to be in all countries where husbandry is rightly managed*) and then there will be left ten millions of arable acres *de facto*. From these ten millions let us subtract one fourth part of the grain raised for feeding and fattening cattle, &c. (comprehending what is destroyed by birds, insects, and the like) and another fourth part for malting, distilling, and seed-corn*, and then the residue will be five millions for making bread, or raising leguminous crops like field pease, or cultivating field potatoes, &c. which supply the place of bread. Five millions of acres of wheat, barley, rye, will at an average of three quarters *per* acre, produce fifteen millions of quarters†."

By

* I have no conception that the consumption caused by cattle equals these articles.

† *Essays on Husbandry*, p. 85. This most accurate and ingenious author, appears to fall into some mistake at page 51, in saying that "England in a fruitful harvest

By this account, the quantity of bread-corn is fifteen millions of quarters; but by the following it amounts only to about nine millions and an half; however, field pease and potatoes are not included.

can produce corn enough (upon supposition that none was sent into foreign countries) to support its inhabitants for *four years*." But being in the same paragraph with a state of exportation taken from Mr. *Danguille*, I apprehend this likewise is advanced on his authority, but moderated; for he asserts,—“ That *England*, since she has made corn an object of commerce, has augmented her culture to such a degree, that one good crop will yield the nourishment of *five years*.” *Avant. & Desavant. de la France & de la G. B.* p. 84. The *Three Traffis* sufficiently prove the impossibility of this. The author remarking on his preceding papers, observes—“ From them it appears we depend more *immediately* than most men imagine for our daily bread on providence, whose gifts are so equally and regularly dealt out, that it very rarely happens, notwithstanding the uncertainty of the seasons, on which the whole in appearance so much depends, that the annual produce of the earth is not equal to the necessary support and wants of man, provided he is not wanting on his part to endeavour to obtain it by a due application to that labour to which he was at first condemned, and from which he never can be dispensed with; for let him exert all his skill and abilities to the utmost, it seems impossible for him to obtain so great a surplus, as to have it in his power to forbear to till the ground, even for one year; since he must be thirty-four years storing it up in common crops: he must therefore throughout his life subsist by a continual labour and constant dependance on Him, who hath promised, that seed-time and harvest shall never fail.” p. 203.

Gene.

General accounts of CORN consumed, &c.

	Growth.	Consumed.	Export.	Import.
Barley	4,603,272	4,433,125 †	171,253	1,106
Oats	4,240,947	4,252,725	3,737	15,515
Rye	1,063,652	1,030,000	36,591	2,939
Wheat	4,046,603	3,840,000	210,771	4,168
Seed †	13,954,474			
	1,395,447			
	15,349,921	13,555,850	422,352	23,728

† It is necessary here to remark, that this table is transcribed from the *Three Tracts on the Corn Trade*, for the sake of the conclusions which arise from it, and not because there is any certainty of its being accurately exact: the ingenious author framed it with as much care and attention as can be expected of any one, but some of his suppositions will admit of doubt; for instance, page 201. rating the consumption of corn by hogs, he allows two bushels to each, *to fat them*, I suppose he means; but this allowance is extremely short of truth: No bacon hog can be fatted on corn alone, with less than two quarters, or sixteen bushels; and a porker that weighs eight, nine, or ten stone (14 lb.) will seldom be fat with less than a quarter, and often ten bushels; besides which circumstances, we should remember that the distillery is much less extensive than it was, and that hogs so fatted, being all of them large, eat probably more than two bushels each, for few distillers depend entirely upon their wash, purchasing large quantities of corn for their hogs. How therefore it is possible to reduce the mean price to two bushels, I have no conception: I venture this remark, the rather to shew that this author is more *under* than *over* the truth when he states the consumption; and consequently the exportation bears the less proportion to the whole quantity.

‡ The seed is called *one tenth*.

My

My chief motive for inserting this account is to shew the reader the *proportion* between the different quantities; as this is a point of very great importance to my present argument.

The export is bare *one thirty-second* part of the consumption; *one thirty-third* part of the growth exclusive of the seed; *one thirty-sixth* part of the growth including the seed; and not near *one third* of the seed itself, supposing it only *one tenth* of the growth*.

* When the exportation ran the highest ever known, 1750, it surpassed the seed only *one twelfth* part;—*Three Tracts*, p. 144.—and it is remarkable that year the price at home was so low as 32 s. 6 d. per quarter—and the next year 38 s. 6 d. Indeed the price falls at home in proportion to the quantity exported; as will appear by the following table :

<i>Years.</i>	<i>Bounty.</i>	<i>Price.</i>
1746	99385	£. 1 19 0
1748	202637	1 17 0
1749	228566	1 16 0
1750	325405	1 12 6

Avant. & Desavant. p. 92. From this little sketch, let the enemies of the bounty cry out, that we give a premium on foreign manufactures, by feeding *their* workmen, and starving our own, which are the common cant phrases; and as contrary to fact as light is to darkness, which is fully proved by this table: Wherein we find the price at home, falling in proportion to the quantity exported, until that quantity became so immense, that the very bounty amounted to above 300,000 l. when the price was the lowest of all.

If

If we suppose the four millions of quarters of wheat, the produce of one million six hundred thousand acres, which is two quarters four bushels *per acre* (near I believe the medium) then the export will only amount to *one bushel per acre*, of wheat. From this remarkable fact, let the enemies of the bounty determine the exportation to be the cause of the high price of corn! They may come to this determination if they please—but it must be while they are blinded with prejudice. —Converse with the most sensible cultivators in every county of the kingdom, and learn of them whether they think a bushel *per acre* any material deficiency of crop—they will answer *No; that they should never complain of any crop that fell only a bushel short of their expectation.* That a deficiency in the crop infinitely oftener extended to a quarter and a half or two quarters. See therefore how much more likely it is, that a light crop should raise the price, than the exportation: in fact, corn being at a high price in *England*, is

never owing to the exportation, but to a deficiency of crop *.

So far indeed has the bounty been from raising the price of corn at home, that, as I have before proved, it has constantly lowered it; and *here* lies a vast saving to the nation, which is not considered by those who plead against the measure. *Since* the bounty, wheat on an average, has been nine shillings and three pence *per* quarter cheaper than before, if reckoned at the mean fineness of quality, and the *Winchester* measure in quantity †. Now the saving of this single article in 68 years (during which time accounts have been laid before parliament) amounts to upwards of *one hundred millions sterling*. The gain thereof to the nation arising from the

* The quantity exported from *England* is but a small part of the general demand; for a modern author observes,—“ That *Poland* sells 7 or 8,000,000 of bushels to one million of *England*’s: if *Poland* had a navigation proper for the business, and open all the year, it is probable that *England* would sell none at all.” *Principes et Observations Oeconomiques*, tome 2. p. 185. 1767. If the case was so, we should find a yet higher bounty necessary, or feel millions of evil consequences; for from the time of our being beat out of the exportation, we should want a sufficiency at home.

† *Three Tracts*, p. 43.

bounty,

bounty, amounts clearly to one hundred and forty millions! without reckoning the infinite variety of hands employed by such additional cultivation.

But let us for a moment examine the arguments commonly used against the bounty; and for this purpose I shall extract the most striking sentiments which I have met with; and oppose to them such facts, as I think will best prove their mistaken principles.

I find the following passage in a well known tract *——“ The laws which give a bounty on exported corn, fish, and flesh, are very prejudicial to our manufactories; *for wages depending on the high or low price, corn, fish, and flesh bear; the bounties on their exportation, serve only to feed foreigners cheaper than our own people, to run away with our trade: the pretence of encouraging tillage, by a bounty on corn, can have no weight now, since our great improvements in husbandry, much less if we erected magazines of corn in every county against times of scarcity; foreigners never buy provisions till they want them, and then*

* *An Essay on the Causes of the Decline of foreign Trade, 1744. p. 30.*

they

they must have them, whether we give bounties or no. Bounties on exported corn, fish, and flesh, serve to feed the French cheaper than our own people; to run away, not only with our woollen, but also our silk, linen, and iron manufactures; every thing we can undertake, all trade, all navigation."——I have thrown the passages into italicks, which immediately demand answering. *Wages depending on the high or low price:* Note, this is the very author who is already detected, p. 39 and 40, of an absolute contradiction in this very matter, when he says, that *workmen when provisions are cheap, will work but half the week.* I have already proved that this combination is false, and as I shall in every article avoid repetitions as much as possible, I dismiss this particular, especially as the author disproves in one passage, what he advanced in the other. 2dly. *To feed foreigners cheaper than our own people, to run away with our trade.* I am not inquiring whether our trade be really declined or not; if it is, I should attribute it much sooner to the price of provisions falling than to their rising; my present purpose is to prove that the consequences deduced in this passage

passage are false : So far has the exportation been from raising the price of food upon our own people, that it has lowered bread 9 s. 3 d. per quarter (*see page 60.*) and it is likewise evident (*page 58.*) that the *bigger* the exportation runs, the *lower* is the price at home. 3dly. *If we erected magazines of corn in every county.* Let us hear what the excellent author of the *Essays on Husbandry* says to this proposal.—“ I shall say little in this place concerning public granaries, notwithstanding the late excellent discoveries and improvements made by *du Hamel*, *Pezenas*, *Intieri* and others; because upon the whole I think public granaries quite *detrimental*, rather than *useful*, in a free state like ours. *National*, and even *provincial* magazines of corn will naturally produce *monopoly*: and an undue fear of famine *, joined with much anxiety about hoarding up grain (which will put a stop to exportation) is one of the surest methods

* Metus in deteriora semper inclinatus est interpres.
LIVII *Hist.* l. xxvii. *Sec.* 44.

————Plurima versat :

Pessimus in dubiis augur, timor.

STAT. *Theb.* l. ii. v. 5.

I know

I know of bringing on a dearth *: nay, supposing the care of national magazines was committed to the management of the most sensible and best principled men that can be found, yet how few would engage in such an undertaking—without proposing to themselves some sort of recompence for their trouble? And of course the œconomy of a private merchant must not be expected from public undertakers, or at least from their successors †.—Thus much upon the absurdity of the plan, provided it was *practicable*; but I shall in the next place introduce the sentiments of another writer to prove it totally *impracticable*. The sensible writer in the *Museum Rusticum*, who signs himself *E. S.* has given a very just and satisfactory estimate of the prime cost and expences of erecting granaries sufficient for three years consumption of wheat, which is the lowest that can be supposed. The buildings, wheat, and consumption in buying amount alone to 24,128,250*l.* and the annual expence of

* *La Crainte de manquer des graines, & les précautions qui résultent, entraînent dans l'écueil que l'on veut éviter.*

Police des Graines, p. 23.

† Page 116.

interest,

interest, attendance, &c. to 2,500,000 *l*. The profit upon the wheat sold, and the bounty together, will scarce pay half this expence *." This is an irrefragable answer to the scheme of granary building: if any further one was necessary, the circumstance of being an hundred and two years in saving the quantity, by means of the surplus of our crops, would, I apprehend, fully suffice. 4thly. *Foreigners, when they want provisions, must have them whether we give bounties or no.* This, surely, is the weakest argument that ever could fall from a man of sense. This writer is very sanguine for our affording our manufactures cheap to foreigners: Why so? since by a parity of reasoning they must have them, when they wanted them, whether our care was great or little; than which nothing can be more fallacious. When they want corn, they must have it; but does it therefore follow that they must have it *from us*? Whoever will afford it cheapest, will command the market; and if the sale is a public benefit, public money should be used to beat out competition. Facts speak

* Vol. vi. p. 409.

clearer than any arguments; we all know that the *Swedes* purchased very considerable quantities of corn of us, till some years ago, a prohibition on exportation stopped our supplying them in a time of need, which was attended with so great an effect, that from that time they set about the business of cultivation with such vigour, that ever since they have supplied themselves, and exported a small quantity. To imagine that foreigners, when they are in want, *must* buy of us, is a mere idle notion: It is calculated, that *Poland* alone, exports seven times as much as we (*see page 60;*) besides which, *Barbary* and *Sicily* send forth vast quantities; not to mention *France*, whose exportation since 1764 has been considerable. The fertility of these countries is much greater than that of *Britain*; what therefore should give us the market, but the skilful application of a bounty! Let us discontinue it, and we shall soon find, that foreigners will feed as well without us, as with us. 5thly. *To feed the French cheaper than our own people; to run away, not only with our woollen, but also our silk, linen, and iron manufactures.* The comparison of *Birmingham* and *Geneva*,

Geneva, already quoted, is a capital answer to this objection. Our linen manufactory has been constantly, to this day, on the increase. We purchase raw silk in *Italy*, and re-export it thither again, manufactured into stockings, even to commanding the market; and as to the woollen manufacture, the *French* cut us off from supplying them, even *before* the bounty was given in *England*, and their gaining upon us in the *Spanish* market has ever been palpably more owing to the connection of the courts, by having a *French* family on the throne of *Spain*, than to underfelling us; for *quality* considered as well as *nominal* cheapness, our woollen cloths are sold all over the world cheaper than the *French*. But whatever inaccuracy there may be supposed in these circumstances, it matters but little, in answer to this passage; because the bounty has been so far from feeding the *French* cheaper than our own people, that it has sunk the price so greatly at home, as to reduce it lower, taking a number of years together, than in any of the manufacturing countries of *Europe*. *Holland*, the principal of all, eats her bread a third dearer than

F 2

England.

England. Suppose the bounty had such an effect, it could amount to no more than itself, or 5 s. a quarter; whereas, it has sunk the price at home 9 s. 7 d. which is 4 s. 7 d. cheaper, with the additional difference of the amount of the freight and charges to foreigners. In whatever light, therefore, we view the objections to the bounty, brought by Sir *Matthew Decker* in this passage, they will be found evident mistakes.

The author of *The Present State of Great Britain and North America*, advances opinions that have as little foundation in truth: he says—"The greater cheapness of corn proceeds from the many improvements in agriculture since the bounty was granted, particularly in the sowing grass-seeds and turnips, with the great improvements that have been made in ploughing, marling, liming, and otherwise manuring of lands; by which twice as much land is rendered fit to bear corn, and particularly wheat, as was before; or as we should now have without *these methods of cultivating and manuring, which were not known in former times.* These are owing to the improvements made in all other

other arts and sciences, and not to the bounty on corn; however, that might have encouraged the farmers to set about these improvements when they *come* to be known.—We should not therefore deceive ourselves with the notion of rendering corn cheap, *by supplying our neighbours cheaper than ourselves.* Was Britain to convert her corn to her own use, and to promote her trade and manufactures by the plenty which the land affords, *it would be much more for her benefit,* than to strengthen her enemies and rivals by these her own resources. This would be a much greater encouragement to the landed interest than all the corn that is exported. Trade and manufactures raise the value of lands much more than the exportation of corn. And the power of the nation would be enlarged with its trade and navigation, and a much better security obtained for lands and every thing else. Was this nation to convert her natural plenty to her own use; she need not be in daily fear of being insulted by her enemies, whom she supports. Agriculture, it is true, is the first thing to be considered, and encouraged by all nations; *but it should be to maintain our own people, and not our*

enemies: if a bounty is necessary for that purpose, it should be given to our own, and not to foreign workmen; or at least we should put them upon a level, and give a bounty upon the one, as well as the other. The bounty on corn is only intended to encourage the growing of it; and that is much more promoted by our own people than by foreigners*."

I have gone through the disagreeable task of transcribing this long-winded passage, which contains so little meaning, that that little might have fair play: it is a mere string of vulgar prejudices, which one would apprehend were picked up in the workshop of a manufacturer.—But to the answer:—1st. *These methods of cultivating and manuring, which were not known in former times.* The dogmatical assertions of such an author as this, who, in another part of his book, talks of the improvement of sowing beans in a poor soil, in the same breath with buck-wheat, are not to be listened to in opposition to the well founded knowledge of a Mr. Harte, who sufficiently proves, that, instead of

* Page 62.

these methods being *owing to the improvements in all arts and sciences*, they were known long ago, and many of them more practised than at present. See his *Essays on Husbandry* *. Nor ought we to forget

* The passage is too much to the purpose to be omitted. " I shall next observe, by way of caution to the reader, that we are too apt to give the name of modern improvements, to ancient practices of husbandry, upon their being *revived* amongst us ; for many useful inventions have been (in a great part at least) lost, or forgotten unaccountably, *desidia rerum, internecione memoriae inducæ* ; and hence it will appear to all persons conversant in books of agriculture, that neither we nor our neighbours in foreign countries, have made so many discoveries and improvements, for a century past, as one is apt to imagine at first sight. It is therefore the business of a candid writer to be *just* to the present age, and not *unjust* to preceding ages.—*Tull* has no right, or even pretension, of laying claim to the drill-plough, which had been used in several *European* countries, almost half a century before he set pen to paper.—Nor owe we the field-turnips to *Tull*, but the *Flemings* ; and that as long ago, as in the middle of the last century.—The nature of all sorts of manures, was, at that time, perfectly well understood.—Folding sheep and wheel-ploughs were thoroughly known in *England* during the reign of *Henry VIII.* Nay, in here and there an instance, our industry has been inferior to that of our predecessors ; or, at least, it may be observed, *Priscorum aut cura fertilior aut industria feliciofuit*. We plough less, and sow later than they did. Marle (the most lasting and cheap of all manures, which may be found in numberless parishes throughout this kingdom) known and used much less at present, than in the

forget the reproaches which *Fitzherbert* (whose book was printed, if I recollect right, in 1540) cast on his countrymen for seeing such numbers of marle pits used in *ancient time*, but then discontinued. Turnips are very unluckily coupled with the manures, for they are not by any means an improvement which advances the culture of bread corn, but the contrary; they are used to prepare the land for spring-corn alone; and when cultivated in rich soils, *prevent* the sowing wheat; for the fallow year which used always to be followed by wheat, is converted into a turnip-crop, which is scarce ever succeeded by that grain. From all which circumstances it is extremely evident that husbandry is not indebted for its present state to the improvements of *arts and sciences*, since all the great improvements in it were known and practised centuries ago—but the exportation of corn did not then give them their present vigour; the knowledge

two preceding centuries. In a word, few manures of much consequence have been lately discovered, except peat ashes; the sowing of which is confined within a circle of 20 miles diameter, though peat (of more or less valuable kinds) is to be found in most counties of our three kingdoms. p. 190, 191, 192.

and

and practice were in the nation, but it was the bounty on exported corn which rendered them so general, and animated all men to such a degree of spirit in breaking up uncultivated lands. If that measure had not been attended with such an effect, it would have been a most astonishing phenomenon.

Possibly it will be said, How can the bounty have proved an encouragement to agriculture, if it has really *lowered* the price of corn to us? since high prices are the greatest encouragers. In answer to this, it is to be observed, that high prices in some particular years are of no comparable advantage to *regularity* of prices. Notwithstanding corn was so much dearer *before* than *since* the bounty, yet prices have not experienced such vast fluctuations as formerly; for instance, to be 4 *l.* and 4 *l.* 5 *s.* *per* quarter, and to drop soon to 1 *l.* 6 *s.* and then presently to rise again to 3 *l.* 5 *s.* and 3 *l.* 6 *s.* But even supposing such fluctuations had been experienced latterly, it would prove nothing against the present argument, because prices were formerly constituted as much by the corn *imported*, as by that *grown*; so that in years,
when

when the farmer ought to have had a great price, he had very possibly a small one, on account of foreigners reaping better crops. A very low year (and some were so low as 1 l. 5 s. a quarter), discouraged them from sowing, which raised the price again, and then foreigners poured in their corn to the ruin of our own cultivators. And it is observable, that if accounts further back than 1595 are consulted, the fluctuations are prodigiously greater.

2dly. *Supplying our neighbours cheaper than ourselves—to maintain our own people, not our enemies—bounty to our own workmen, not to foreign ones.* If the remainder of the passage contains any meaning, it may be discerned in these touches; but what I have repeated so often, is a very clear answer; that the whole is a falshood; for so far has the bounty been from causing such effects, that it has lowered the price of corn at home very considerably; so much, that the greatest manufacturing nations in *Europe*, eat dearer bread than the *English*; and those who purchase the corn on which the bounty is given, pay dearer for it, by nearly the amount of the bounty, than we should eat it at home, had no bounty been given;

given; and without supposing wheat to have rose in price proportionably with other commodities; which is a supposition there is no reason to make.

3dly. *Was Britain to convert her corn to her own use, it would be much more for her benefit.* I should agree entirely with this author, could the thing be done; but can any one suppose that were the exportation of corn prohibited, the same quantity would be grown? and manufactures and population encrease in proportion to the former surplus? Nothing further from the truth. Plentiful years would come, and the surplus finding no vent abroad, would regorge upon the markets at home, and sink the price so much, that manufacturers and all kinds of workmen would spend half their time at ale-houses, and in idleness; the farmers would not be able to afford to sow, and then excessive high prices would come; which fluctuation, with its consequences, would ruin manufactures, as well as agriculture, and the truth of the maxim so often repeated, proved as clearly as it at present is in some other countries, *that they who grow not a surplus, cannot grow a sufficiency.* But this author,

author, in the point now under consideration, contradicts himself as palpably as Sir *Matthew Decker* did on the same subject; for, but the page before, he says, “ Among the other advantages of the trade and exportation of corn, the greatest perhaps is, that it serves the nation for a public granary; *it is only the bounty and exportation that encourages the farmer to grow more corn than is consumed; and thereby to provide the nation with such a store, which supplies it in time of want.* Thus the exportation is a granary which supplies the nation in time of scarcity, and for that reason, *should be carefully husbanded and preserved in times of plenty.* And as an article of trade, corn is, perhaps, more valuable than any one in the kingdom.”—Can any one believe that these sentiments, which are so extremely just, are but two pages off the preceding quotation, in which it is asserted; *Was Britain to convert her corn to her own use, it would be much more for her benefit.* Does she not, according to the author’s own sentiments, *in the other passage,* convert it to the most beneficial use?

As to the scheme of giving a bounty to our own workmen, which he enlarges upon

upon in various parts of his work, it would be totally impracticable, infinitely expensive, and open in the execution to numberless frauds and abuses; and were all those objections got over, and the plan executed, it would do more mischief than good: for it would be a sure means of encouraging idleness, with all the concomitant ill effects, set forth between the 33d and 42d pages of these Letters.

Some writers go even further than those I have quoted, and assert—"By draining the kingdom of this most essential production of the earth, the price of corn *is greatly enhanced to our own people* *." But this being nothing but a mere assertion, deserves no particular answer. In another passage he uses something like an argument, and therefore deserves more attention.—"But if the bounty is the cause of our growing greater quantities of corn, I shall be glad to learn from the advocates for this measure, how it happens that all parts of the kingdom do not grow greater quantities of corn? that one county in

* *The Causes of the Dearness of Provisions assigned.*
GLOUCESTER, 1766. p. 24.

particular,

particular, and that none of the largest, has some years exported nine parts out of ten, of all the barley that has been shipped for foreign markets, though all counties are entitled alike to this bounty? If they answer, the lands of this county are better than those of any other, then the goodness of the lands, and not the bounty, is the cause of their growing greater quantities of corn. If they say, the situation of that county is more convenient for exportation, then the situation, and not the bounty, is the cause, &c. &c."

Norfolk, I apprehend, is the county here meant; but as to the mere assertion of its exporting nine parts out of ten of the total, it is too extravagant to gain credit: the author forgets the exportation from *Hull*; but if it amounts to an half, a third, or a fourth; or whatever proportion is fixed upon; I have little doubt but that county will be found to yield nearly a proportional quantity; for there are many five counties which do not produce so much barley as *Norfolk*; it is therefore a natural consequence, that the quantity *exported*, should be in proportion to the quantity *raised*. But whether the superiority of *Norfolk* be
owing

owing to soil and situation or not, it either way proves nothing against the bounty; because those circumstances most certainly existed equally strong before the bounty, and yet they were far enough from causing that increase of tillage which has ensued since. The bounty acts by enabling *England* to sell as cheap as other countries. *Spain*, for instance, wants corn; and *Barbary* and *England* have it to sell: of what account is the soil and situation of particular counties in the latter, if there is the least degree of superior cheapness in the product of the former; or if they are upon a par?—but then comes the bounty, and turns the scale at once. If an exportation of corn was only allowed, and without a bounty, *Norfolk* would, nevertheless (whenever any was exported) possess the same superiority: if none was exported, the case would be the same: does this local variation of soil, and other circumstances, prove any thing against the expediency of so general a measure as the bounty? The argument is nothing but quibbling upon words.

But to proceed to another passage, written in the same spirit. “ Would gentlemen

men have a bounty given when corn is very dear, or when it is very cheap? It certainly ought not to be given when corn is very dear; because it will enhance the price of what is consumed at home, and bring on a scarcity or famine. It is unnecessary to grant it when corn is very cheap, because the lowness of the price will be a sufficient inducement for foreigners to purchase it."—But suppose corn in other exporting countries, is as cheap or cheaper than in *England*, how is the surplus of plentiful years then to be sold? Not at all. It would remain at home, and be attended with all the fatal consequences so often mentioned. Those countries which export, have an equal chance with us, for crops above the common produce; and to imagine that we have a monopoly of corn, or can for one moment command the market, while others sell one farthing cheaper, is an absurdity too ridiculous to deserve an answer. Corn may easily be too cheap at home, for the prosperity of our manufactures; but can never be made too cheap to foreigners; because, the cheaper we sell, the more certain we are of the market; and I am very clear in my private opinion, that

that, supposing we lower the price so much to foreign manufacturers, as many of these authors assert, the effect is of no good consequences to them, since a low price, which is not perfectly regular, and none that depends on importation can be absolutely so, only encourages idleness. Manufactures flourish no where so well as in *Holland*; where living is dearer than in any country in *Europe*, but then it is regularly so: however, I advance this as an *opinion*, but do not venture it by any means as an *assertion*.

Sir *James Steuart*, in his celebrated work lately published, has the following remark,—“ The population of the *British* isles is not stopt for want of food; because, one sixth part of the crop is annually exported. I answer, that it is still stopt for want of food, for the exportation only marks, that the home-demand is satisfied; but this does not prove, that the inhabitants are full fed, although they can buy no more at the exportation price. Those who cannot buy, are exactly those who, I say, die for want of subsistence: could they buy, they would live and multiply, and no grain, perhaps, would be

exported*.” There is a capital mistake in this passage; instead of the exportation amounting to a sixth of the crop, it scarcely rises to a thirty-third part; which is so prodigious a difference, that I question, whether the author would have drawn his conclusion, had his facts been so very different: however, I shall suppose the case as it is here stated; and venture to assert, that none can die for want of subsistence, who have any industry to keep themselves alive: nay, if they are totally without industry, and corn at twice the exportation price; our Poor-laws are so extremely faulty, that they would nevertheless be fed: but of this, more hereafter. As to all that pursue any employment, of whatever kind it is, they most undoubtedly may be fed; and that well too, at the highest prices wheat has been at of late years; and in case their families are very large, their parochial assistance is by many degrees too considerable, to suffer a single person in the whole kingdom to starve. And let any one acquainted with the poor of this kingdom, consider, if those who

* *An Inquiry into the Principles of Political Oeconomy*, Vol. 1. p. 100.

expend such considerable sums in tea and sugar, can live in a country, where the necessaries of life are too dear. Indeed, this argument of Sir *James's*, by proving too much, may possibly be found to prove nothing: for if corn ought to be so low that all can buy, it must be so low that all may have it for next to nothing; which is impossible: otherwise, according to his own conclusion, they perish; for if they are indolent enough not to work above one day in six, corn must be cheap indeed, to be cheap enough for them! And there can be no doubt, but if it was at a certain price, their idleness would extend even to that degree, and what then would become of manufactures. I leave any one to judge.

—Wages, however, would rise greatly; for the men would be to be *bribed* to do common work. All, therefore, that Sir *James* can mean to prove, is, *that the idle part of the poor* may perish, from not being able to buy corn at the exportation price, *if the public does not buy it for them.*—I will grant this axiom freely; but very little reflection will prevent any one from believing the *industrious poor* will ever be in the same predicament.

As blind as some, in this country, may be to such immense advantages, foreigners are not* : the late proceedings of the *French* ought to create in us an horror at the idea

* *M. de Boulainvilliers* remarks with great justness, after speaking of the excellency of marling — Si on remonte à la première cause de cette nouvelle méthode qui a augmenté en général les productions de la terre en Angleterre, on la trouve dans la sage politique d'une gratification établie en 1689, par acte du parlement, pour l'exportation de ses propres grains. Au lieu que, dans les autres états, les particuliers payoient au gouvernement pour leur sortie, celui-ci au contraire, paya les particuliers. — Tous les moyens ordinaires, pratiqués jusqu' alors pour augmenter les productions de la terre, avoient été superflus, ou au moins, peu utiles. — Avant cette époque l'agriculture d'Angleterre étoit au rang des médiocres de l'Europe. — Tant que cette monarchie ne pensa qu'à sa propre subsistance, elle se trouva presque toujours au-dessous de ses besoins ; le plus souvent obligée d'avoir recours à l'étranger pour compléter ceux de la nation ; mais lorsqu'elle fit de son agriculture un objet de commerce, la culture de ses terres devint une des plus abondantes de l'Europe. — Sans ce coup d'Etat, le mieux combiné de tous ceux qui ont encore paru dans la politique moderne, l'Angleterre n'auroit jamais semé que pour elle-même ; car qu'auroit-elle fait du surplus de ses grains ? La gratification seule pouvoit lui en assurer la vente dans les pays étrangers ; & par-là, être la source unique de l'augmentation de ses récoltes. — On objecta contre ce système (*car il y a toujours dans les états des gens qui ne voient que le mauvais côté des réglemens*) que donner une gratification pour l'exportation des grains, c'étoit tenir en

idea of *obstructing* such a prodigiously valuable trade. Popular clamours, raised by

en Angleterre leur prix plus haut qu'il ne seroit sans cela, & le donner à l'étranger au-dessous même du prix de ses propres marchés ; ce qui diminueroit le prix de la main d'œuvre des autres nations, & augmenteroit celui de la sienne.——Il a été suffisamment prouvé par la comparaison du prix des grains, avant la gratification, avec celui d'après que le bled n'a point augmenté en Angleterre.——Mais quand cela eût réellement formé un inconvénient ; de quel poid pouvoit-il être mis dans la balance des avantages ? Comme, par exemple, celui d'empêcher que l'agriculture de ses voisins ne devînt florissante réduire la plûpart de leurs terres enfriche ; diminuer la classe de leurs laboureurs ; en un mot, faire tomber leurs gouvernemens dans un état précaire, en leur ôtant les moyens de subsister par eux-mêmes.——Qu'on combine tous les moyens que cette monarchie a mis en usage, depuis un siècle, pour former sa puissance, & on trouvera que c'est à celui-ci qu'elle doit particulièrement son élévation.——Les avantages qu'elle a reçu de sa gratification ne peuvent se dissimuler ; la face de l'Angleterre en a été entièrement changée. Ce n'est que depuis cette époque qu'elle a joué un premier rôle & qu'elle a figuré avec les plus grandes puissances de l'Europe.——Ce ne sera qu'en adoptant son système de gratifications, que notre agriculture pourra jamais figurer à côté de la sienne.——Non seulement l'augmentation de nos richesses le demande ; mais notre système politique lui-même l'exige.——Il n'est pas bien aisé de déterminer le point fixe, chez nous, de cette gratification.——*Les Intérêts de la France Mal Entendus. Vol. I. p. 163.* I should not have introduced so long a quotation in a foreign language, but it is so remarkably applicable to the passage in the text, and so very consonant to the late and present ideas of the French ministry, that the importance of it must plead the excuse.

interested people, ought never to be hearkened to: 'tis to facts alone we should attend; and facts will ever display in the strongest manner, the miserable politics of letting a set of idle, debauched, and insolent manufacturers——carry us by riot into measures pernicious to the well-being of the kingdom.

This slight mention of riots, gives me an opportunity of remarking, that it is never the industrious workmen of any sort, that join and form mobs! It is only the idle, drunk, and disorderly ones that are ready to take a part in such mischievous doings. This, I believe, will be found universally the case: I have experienced the truth of it myself; and I might add, that the more they earn, the more likely they are to riot, of which I found some pregnant instances in a late journey I took through several parts of the kingdom; and which I shall fully explain to the public in the minutes I took upon the road, and which I purpose laying before them.

In *July* 1764, the *French* King, in the most solemn form, issued out a perpetual and irrevocable edict, to authorize and encourage

courage the exportation of corn: and nearly at the same time another, allowing all persons to trade in corn, and to circulate it freely throughout the whole kingdom †. This wise and truly political conduct should make us eagle-eyed, to the preservation of such a glorious commerce. If we are so infatuated as to tamper * with

† These remarkable edicts were gained (as I have been informed, on good authority) through the application of M. *Pattullo*, a *Scotch* gentleman, author of the Treatise entitled *Essai sur l'Amelioration des Terres*, 12mo.

* A late writer speaks of the *French* exportation in a manner which ought to fill us with fears. "We reckon the annual exportation, says he, of three millions of bushels, to make about 1800 or 2000 voyages; and employ four or five hundred ships: but it is doubtful if we have added that number to our former one.—Nevertheless, in the years 1764 and 1765, circumstances were very favourable to our exportation; the defect in the *Sicilian* crops showed itself at the end of the autumn of 1763; the first succours, and the most prompt, were those of *France*. In 1765, *Portugal*, *Spain*, *Italy*, and *England* imported corn from us; the granaries of the North were empty, and the crop very moderate: notwithstanding all this, it is evident, that in the course of these two years we have not exported more than three millions of bushels.—Our proximity to the consuming countries, is the reason that we have broke in upon the exportation of *England*, more than that of *Poland*." *Observations Oeconomiques*, tom. 2. p. 224. 1767.

the bounty which has gained us such wealth, we may expect that our indefatigable neighbours will take advantage of such a conduct—and meet us as competitors in every market. This has been too often the case in other branches of trade; heaven forbid it should come to pass in this!

In all affairs relative to agriculture, we ought ever to regard a guinea raised by cultivation, as materially different in value to us from a guinea raised by any other trade, profession, or business: indeed its value so procured is infinitely greater, considered as a real source of national wealth. But never let my countrymen compare the plunder gained from a conquered enemy, or any immense private fortunes suddenly acquired, as of comparable value to the state with the small, but immensely valuable ones made by agriculture. Bravery and conduct exerted in the public service, deserve great reward——but such fortunes increasing that inequality among mankind which is of no influence to husbandry, ought never to be regarded as a *public* benefit. A true politician will see at one glance, the difference *to the state* of ten thousand pounds

pounds gained at once by plunder, and the same sum acquired by a diligent and industrious cultivator! Great and material is the difference.

If a lively cultivation is of such vast consequence, surely every one must allow that the true political knowledge is that of the actual state of the kingdom, in respect of cultivated and barren land. Amongst the variety of the surveys of counties, and the infinity of maps which are perpetually published, I should be rejoiced to see one which distinguished the nature of the soil, by different colours; from exceeding rich, to waste and uncultivated: if such surveys were repeated now and then, they would form the most certain scale, whereby to judge of the administration of the public affairs in any age.

Having in this manner given my sentiments, on the benefits arising from a bounty on exported corn, and I hope proved *their* justness; I shall in the next letter consider some material points in the immediate practice of rural oeconomy, which are at present general topics of conversation, and deserve the closest attention of all true patriots.

L E T T E R I I I .

HAVING in my two preceding letters proved the great and real importance of agriculture to this kingdom; and shewed that it is the great foundation of all our wealth; I shall now proceed to inquire into the merits of several practices at present common in our rural politicks, and state as accurately as I am able, the good or ill consequences resulting from them.

I might enter into a long discussion of enclosures, was it not a subject absolutely exhausted by preceding writers; and here I shall refer the reader particularly to the *Memoires* of the *Berne Society*, in whose valuable volumes much important knowledge of this subject may be gained. The universal benefit resulting from inclosures, I consider as fully proved; indeed so clearly, as to admit no longer of any doubt, amongst sensible and unprejudiced people: those who argue now against it are merely contemptible cavillers.

Their benefit consists in, 1. The vast increase of the earth's products. 2. That
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of the employment of the poor, and consequently their number. But some will yet urge the advantages of a poor man keeping a cow ; they forget, however, that the neighbouring farmers have a right of commonage as well as the cottager ; and they take especial care by means of their flocks, to starve every animal the poor people can think of keeping.

* * *

The different circumstances attending large and small farms, are matters now of the most serious attention. Complaints are every where made of engrossing farms, as it is called——and the cry against the practice is resounded from one side of the kingdom to the other, with every circumstance that can aggravate the ill consequences which attend it. I shall enter into a cool and dispassionate inquiry, into the real state of this celebrated case : I have long considered it with the utmost attention, and will impart to the reader the reasons of the sentiments I have adopted, *for* and *against* it, on the most attentive examination. The four heads, under which

which farms in general are naturally to be considered, are,

First, The quantity of produce; and the value of it to the farmer and the public.

Secondly, The number of people employed.

Thirdly, The different value to the State of the hands employed in each.

Fourthly, Of the difference of advantage to the landlord.

And Fifthly, make a few remarks on the number of horses kept.

First, Of the quantity of the produce, and the value of it to the farmer. It must appear very clear to every one, who is the least conversant in husbandry, that farms must vary in the produce according to the proportion between the substance of the farmer, and the quantity of the land he occupies. The material inquiry to be made here, is, Whether a great farmer cultivates his land in a more perfect manner than a little one? In considering this question, I must make a distinction between a rich and a poor soil; for whatever doubt there may be of the superior advantage attending either great or small farms in general—there can be none about them when consisting of poor land.

Farms

Farms on such a soil have generally a sheep-walk, and in the *present mode of culture* cannot be managed to the greatest advantage, without keeping a flock large enough for a fold. Now such a flock requires a much larger capital than any little farmer can possess; for did he possess it, we may naturally suppose he would no longer be a *little* farmer: and yet a late writer has blundered so egregiously, as to call the *small farmers* the *breeders of our sheep*——

“ The small farmers, the breeders, and nurfers of our sheep and horned cattle; the raisers of our bacon, butter, cheese, poultry, &c. are banished from their native soil, &c.*” This language of declamation and nonsense, has not one fact out of fifty millions to support it, even in pretence: he must be a novice, indeed, in rural œconomy, who does not know that the *small farmers* keep *no* sheep; seldom *any* cows, and yet fewer hogs——As to the article of poultry, I have nothing to say to it; because its being either cheap or dear, is a matter of perfect indifference to the

* *The occasion of the dearness of provisions, by a manufacturer, p. 18.*

good of the public. These writers, whose only merit is that of caviling at the time present, contradict in one passage, what they huzza for in another—they would have little farms in one page—and argue for plenty of sheep in another!—Another circumstance to be considered, is, the course of husbandry such light soils are generally thrown into, which consist very much of turnips and ray-grass with clover; these crops require, if well managed, more cattle to consume them than the flock, and these are generally either a dairy of cows, or a stock of other horned cattle. All this whole course of husbandry, is superior to a small capital. It is generally reckoned, that the business of folding goes off very slowly with less than four hundred sheep: I know of no *flock* that consists of less. These, at ten shillings a sheep, alone amount to two hundred pounds; one fourth of which single sum is sufficient to stock a little farm. Again: a light soil, generally speaking, has under it a bed of marle or clay, which is the common manure used for it—and I may add, *is* used for it by all good farmers on such a soil. To marle or clay an acre of poor land, cannot be done under

under three pounds, if effectually performed. Indeed, when the manure is shell marle, called in *Suffolk* cragg, much fewer loads are sufficient; but, as all I have seen lies deeper than marle or clay, the expence of getting at it is the heavier. Three pounds *per* acre, is an expence infinitely too great for any little farmer. I could offer other reasons to prove that it would be a ridiculous practice to parcel out a poor country into small farms—that it would never tend to the improvement of the soil—and that it would generally be attended with the ruin of the farmers, who were so imprudent as to rent such farms: nor should we forget that chases, forests, and other waste lands, are in general of the poorer cast. —The case of rich lands, however, admits of more doubt.

Farms may be divided into such as employ one plough—two—large farms—very large ones, and grazing farms.—But it is necessary to explain the original of my ideas of these distinctions. I am pretty well acquainted with the husbandry of several counties, but know little concerning those farms, in *some* which are
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entirely cultivated by oxen. Thus I am not able to point out the size of those in the oxen-counties, which answer to one or two, &c. horse ploughs. What I mean by a plough, is one man and two horses, no driver.

If we examine the generality of little farms, we shall find these circumstances attend most of them. The land lett at a much higher rent, than the neighbouring middling and large farms——cultivated with one plough——one cart kept, which, with the addition of ladders, serves by way of waggon for the carriage of corn, hay, &c. On some, however, a waggon is kept, and then a tumbril besides.—The cows, if any, of a poor and stunted kind——no sheep kept. These are generally the chief circumstances relative to the stock.

Such a farm as this, being the first step which those labourers, servants, or others in general take, when possessed of money enough to begin business, it is of course entered upon the moment they have wherewithal to stock it.—The horses that are bought are scarce ever strong and able to endure hard work, as there is a material difference between the price of stout horses, and what we usually see in a little farmer's

stable. This single article is attended with no inconsiderable loss to the farmer; for it is a matter of fact which needs no illustration, that weak horses will not perform the business of a farm so effectually as strong ones, and thence results a constant balance against him, when compared with a farmer able to take a larger tract of land. The keeping only two horses, entirely debar's all purchasing of manures, (unless they are of so expensive a nature, as to be of very little bulk; and such are scarce ever bought by any but rich farmers) which are of vast consequence to those lands situated within reach of towns. It is surprizing what great benefit coal-ashes and mortar rubbish are of to stiff lands——besides the great quantities of horse, hog, and cow-dung that are to be procured in that manner.

All the rest of such a little farmer's tackle is weak and insufficient for the due culture of his fields; and it may easily be conceived in idea, as well as verified by experience, that there is a constant loss owing to such deficiency of strength in the cattle and implements: this loss leaves the farmer the less able (in *his* opinion) to rest his lands at proper periods for fallow-years

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—or to be content with sowing crops by way of fallow, which do not draw much nourishment from the ground; as these crops are not of such ready sale as corn, but generally require cattle to be bought to eat them off. These little farmers are equally deficient, in keeping their fences in strong and impenetrable order; deepening their ditches, and hollow-draining their wet fields—all points of no inconsiderable importance. Lastly, (as the general consequence of all I have advanced) I must add, that from the most attentive observation, I have great reason to believe, that the crops raised by these little farmers, are scarcely ever equal to those of their more substantial neighbours. It is therefore very clear, from these circumstances, that the quantity and value of the produce of little farms are the less, on account of their being so small; and of course the occupier and public both suffer*.

As to the next division of farms, those which are cultivated with two ploughs and four horses; a very great part of the

* The small farmers cultivate *corn* with much less economy than large ones. *Observations Oeconomiques*, tom. 2. p. 71.

objections to the first, are in these removed. If there is a sufficient quantity of grass-land in the farm, and the farmer's stock in general equals his *number* of horses, we may suppose the four horses are four stout ones, fully answerable to their work: in this case the business of ploughing and harrowing may be duly performed, and four horses are sufficient for the bringing purchased manures on turnpikes; but this circumstance does not extend to other roads. Four horses will likewise do for employing two tumbrils at carting clay, chalk, earth, or other soil mixed in compost dung-hills, to advantage; which work (if ever done) goes off very slowly with the little farmer. In the next place, the rents of those farms, which require four horses, are seldom so high as the others; and the farmer is necessarily a richer man, and consequently more able to improve his land by the purchasing some manures, and raising more from cattle properly kept at home.

It is very clear, therefore, that the land occupied by a tenant who keeps four horses, must be much better cultivated than when farmed by the man who keeps but two; or in other words, the quantity

and value of produce may be infinitely greater, both to the cultivator and the public.

The next scale of farms I rank under the title of *large ones*, viz. those that are tilled by six to a dozen horses, or nearly those numbers. It is only men of considerable substance that can master, *in a proper manner*, these farms. I shall only observe in general, that these men are yet more able than the latter class to put all the springs of a perfect culture in motion. The article of purchasing manures is (on turnpike-roads) within the power of four horses, but the farmers who keep only that number scarce ever do it. It is the class now before me, who improve their fields in that manner, and in any situation, as to roads, unless they are so extremely bad, as to render the work too expensive to answer. All kinds of husbandry-improvements are executed with spirit by *these* men: advantage is taken by them of all occasional and accidental manures:—They drain all their wet lands—keep their fences in admirable repair—plough and harrow their lands thoroughly:—and above all, are rich enough at any time,

time, to purchase a sufficient stock of cattle for consuming all fodder, turnips, &c. on the premises, and thus are never induced to pass by the *fallow-crop*, because unable to command the stock necessary to eat it off. These are generally turnips and clover; and there is a great difference between selling the turnips, and letting them be carried off the farm; or feeding sheep or black cattle with them on the pasture fields:—and between making hay of the clover, and feeding cattle with it in the winter; or feeding it*.

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* The effects of a vigorous culture, such an one as the great farmer is here supposed to practise, are finely painted by the admirable author of the *Essays on Husbandry*.—"The more an husbandman gains, the more, generally speaking, he becomes vigilant, frugal, and industrious. *In proportion*, as the farmer thrives, the land improves: and this is the meaning of the French proverb, *Tant vaut l'homme, tant vaut la terre*. Such a man being once placed above the reach of want, has the means of hiring better servants, and maintaining a larger stock of cattle; making or purchasing manures; trying experiments, or devising improvements. *In proportion as he cultivates more land*, he acquires more knowledge, and gains greater profit; till at length he begins to love husbandry, and values himself on a profession which increases his little store, and gratifies his vanity into the bargain. Under such a cultivator, you see, in one place, waste lands rendered arable, or

In these, and every other instance that can be named, this class has the advantage over the last, and of course, infinitely over the first. The necessary consequence is, that the quantity and value of the produce of the land in their occupation, exceed, both to themselves and the public, the quantity and value of that in less farms.

The fourth class consists of those farms which require, and are cultivated with a larger number of horses; from twelve to twenty, thirty, forty, fifty, and even to an hundred. I shall not detain the reader, with dwelling on many particulars, relative to these very large farms: I shall only observe, that there may be many, which, as

converted into artificial pastures: this is a true conquest; an acquisition and appropriation which enriches his landlord and himself, but injures no man! In another place he fertilizes a parched soil by floating of it, or bringing little streams to run through it, feed, and cloath it with wholesome verdure; or else drains morasses, where abundance of the same water is a nuisance, and decorates the soil with rich crops of useful vegetables, as flax, hops, cole, rape, &c. instead of flags, moss, rushes, and brambles.—Such a tenant ought to be patronized and not discouraged." *Page 202.* But one would think from reading the ill founded, and hasty productions of the press, at present, that these great farmers who work such improvements were the pests of society!

I remarked at first, are situated on an extreme poor soil, with a large sheep-walk belonging to them, which cannot be occupied on any small, or even middling scale: but these I mentioned before as exceptions, and mean the repetition now as such. In rich soils, or in such as let for seven shillings an acre and upwards, I am clearly of opinion, the farmer who keeps from six to twelve horses, *may* cultivate his land as well, with as much profit to himself and the public, as the occupier who keeps any larger number——and much better than those who cultivate *excessive* large farms; because the farmer then has more ground and business than he can properly oversee.

The consequences to be drawn, therefore, from this review of the several classes of farms, with respect to quantity and value of produce to the farmer and the public, are as follows; *viz.* In the *first* class, the produce is the most inconsiderable of any. In the *second*, it is much superior to that in the first, but not equal to what the land is capable of. In the *third*, the farm is perfectly cultivated, and yields as great and valuable a produce, as it can do in any. In the *fourth*, it does not yield more

considerably than in the third—and when the size of these rise towards the height, their produce is not *so* great as in the third class.—I should come now to the last class, of *grazing farms*; but here I omit them, to speak of them hereafter by themselves.

And here I must caution the reader, not to conclude, when I say *such a farm yields so and so*, that farms so circumstanced always do yield in that manner: I only mean that the *generality* of such farms produce, as I have said: but vast numbers of circumstances may cause exceptions to be made to every rule; and particularly the lands being occupied by injudicious or slovenly tenants. It is impossible ever to advance any maxim in so comprehensive a style as to exclude all exceptions: candid readers will take a general idea of each class, without descending into circumstances which cause exceptions, with intention to overturn the classes themselves: I shall by and by examine some particulars myself, which have a near connection with these exceptions.



The second head, under which farms in general are to be considered, is, *the number of people employed in them.* And in considering this point, I shall preserve the same division of them into classes as before.

The first class of farms, those which are cultivated with one plough, are generally managed by the farmer alone: if any additional help is called in, it never consists of more than a labourer, now and then at a *great pinch*, as they call it, such as thrashing out their little all of corn, the moment it is in the barn: but some of them hire a lad for a yearly servant, if their farm is not of the lowest quantity of land which two horses can cultivate; in this case they never hire any labourer. From the minutest observation I can make, this is nearly the number of hands employed by the farmers of the first class.

Those of the second universally (unless they are *remarkable* hard working men themselves, or have sons grown to manhood) keep a servant, who has the *care* of the horses, and ploughs with a pair of them: besides this man, they *in general* keep one labourer regularly, to plough
with

with the other pair, and many of them a boy for attending the cattle, harrowing, and other slight works of a farm. At harvest or the beginning of the thrashing season, they may hire a labourer extraordinary.

Thus supposing twenty acres of land the farm which employs two horses, (I am only forming a supposition at present, as I shall speak of the quantity more particularly by and by) and forty for four horses; in this case, the first maintains the farmer, a servant boy, and accidentally a labourer for a very short time: the second, the farmer, a servant, a labourer, and generally a serving boy besides, with an additional labourer at busy times: thus the four-horse farm employs most hands; in a good measure owing to the farmer being rich enough not to depend totally on himself for one plough.

The third class, those from six horses to twelve, vary greatly in the number of hands they employ; for many farmers in this class are rich enough to perfect improvements of sundry kinds, above the purses of the two former classes: and in so doing employ a great number of people.

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The spirit with which they carry on their business, greatly promotes the employment of labourers—indeed chiefly consists in it—and it is further to be considered, that the standing workmen of their farms (or servants) are, one to every plough they keep*. Besides, the men employed in carting clay, chalk, earth, &c. for the improvement of the land, must greatly exceed those employed in less farms: and in harvest, a large farmer always allots one man to every twenty acres of corn, of whatever sort, supposing a common mixture of winter and spring-corn. From these several circumstances, I am inclined to believe, that a given number of acres portioned into farms of this class, maintain more hands in general, than either of the two former.

As to the fourth class, I am very much in doubt concerning it. When I before spoke of it, I mentioned the difficulty of one farmer's overseeing and properly ma-

* It should be observed, that by a plough is meant, the man necessary to one that works with one pair of horses a day, eight hours; if a change of horses and men is used, as some farmers practise, so as to keep the plough going in summer sixteen hours, the case is different, though the same as to horses and men.

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naging so large an extent of ground as *some* occupy who are ranked in this class. Now such difficulty ever introduces some confusion, and a confused management of a farm, as constantly tends to the ruinous practice of suffering several hands in an irregular manner to perform what might be done by one. I never failed on such occasions to make this remark. Whether this circumstance answers in point of the number of people employed, to others which may be brought on the contrary side of the question, I am a little in doubt: the chief of these is the different *farmers*, which might be fixed in the tract of land which one occupies; for as to the number of labourers or servants, I cannot help reckoning them nearly the same. However, another point should not be forgotten; which is, that the *probability* of high improvements which employ a great number of hands, lies most in favour of the most substantial man, or in other words, the greatest farmer. Nevertheless, I own my private opinion tends towards the third class, in this respect of population; but not without doubts, which I take all possible care of removing.

One

One circumstance, however, should always be remembered, which is, that the farms of this class are generally situated on a very poor soil; no one ought therefore to conclude, that the tracts of land so occupied, would maintain a vast number of hands, if cut into small farms; merely because it is observed in common, that a country is populous which abounds with such. This comparison is frequently made, without attending to the *soil*: and that single circumstance can alone prove the comparative population. I know many very large farms which could not be cultivated in parcels *so small* as 500 acres. Examine the sandy parts of *Suffolk*; take a view of the farm at *Capel, St. Andrew's*, of near 4000 acres of land. But these are only conjectures. By making numerous inquiries, I am able to lay before the reader, something of better authority than any reflections: It is the number of hands constantly employed by four and twenty different farmers, of the first, second, and third classes. I have not been able to gain these particulars of so many very large farms; nor are the few I have got, respecting those on a poor soil, which is

an

an exception to every thing relative to population. The number of acres are the *arable* ones on each farm: had I been guided by the total number, the scale would have been useless; as population would, in all, have been determined by the greater or less quantity of such, without depending in any degree on the size of the farms in general.

C L A S S I.

	<i>Acres.</i>		<i>Hands.</i>
No. 1	— 17	—	1
2	— 13	—	1
3	— 16	—	1
4	— 17	—	1
5	— 26	—	1
6	— 26	—	1
7	— 22	—	1
8	— 30	—	2
	167		9

All these, except the last, are cultivated by the farmers themselves.

C L A S S

[III]

C L A S S II.

	<i>Acres.</i>			<i>Hands.</i>
No. 1	55	—	—	3
2	43	—	—	3
3	50	—	—	3
4	80	—	—	4
5	50	—	—	3
6	56	—	—	3
7	56	—	—	3
8	55	—	—	3
	445			25

C L A S S III.

No. 1	110	—	—	8
2	150	—	—	9
3	97	—	—	5
4	88	—	—	4
5	160	—	—	9
6	240	—	—	17
7	200	—	—	10
8	100	—	—	8
	1145			70

In the first class, there is one person to every 18 acres.

In the second, one to 17.

In the third, one to 15.

And

And it should be further remarked, that the extraordinary hands employed at certain times of the year, of which no account is taken in these tables, are much more proportionally considerable with the third class, than the second, and with the second, than the first: which increase the superiority of the two former.

Thus, in regard to the number of people employed on the land, whether it be divided into farms of the first, second, third, or fourth classes; the following conclusions are to be drawn from the foregoing remarks, *viz.* That the second class employs more hands than the first—the third, than the second—and *it is imagined*, the fourth may employ something more than the third; but then it is supposed more than to lose such a superiority, in having only one *farmer* on a large tract of land; instead of several. Or in one word, the third class is most advantageous to population.

And here being on the subject of population, I think it may not be amiss to remark, That a late political author, speaking of the connection between the soil, and the increase of the people on it, falls into,
what

what appears to me, a contradiction ; for he says,—" The more free and simple the manners of a country are, *cæteris paribus*, the fewer inhabitants will be found in it *." But in another place he asserts,—" The more frugal a people are, and the more they feed upon the plentiful productions of the earth, the more they may increase in numbers †." Now if *frugality of living*, be not the same thing as *free and simple manners* ; or in other words, if a people that live frugally, have not necessarily simple manners, I am greatly mistaken. Population depends upon the perfection of cultivation, and this again, reciprocally upon population ; and simplicity of manners, as opposed to excessive luxury, is greatly favourable ; but that *simplicity of manners*, which is not attended with *frugality of living*, is of a very equivocal generation.

* * *

The third head under which I observed farms in general should be ranked, is *the*

* *Inquiry into the Principles of Political Oeconomy*, Vol. I. p. 36.

† P. 117.

value to the State of the hands employed by them. And here I must apprehend, that the little farmer and the day-labourer are to be considered in the same degree of public utility, if we are to consider their value, in proportion to their substance; but this will admit of some doubt. However, as to the first class of farms, in whatever manner such a case is determined, still the little farmer and the day-labourer are in general upon a par. From all the observations I have made, I am convinced that the latter, when on an equality with the former in respect of children, is as well fed, as well cloathed, and sometimes as well lodged as he would be, was he fixed in one of these little farms; with this difference—that he does not work near so hard. Indeed I regard these small occupiers as a set of very miserable men. They fare extremely hard—work without intermission like a horse—and practise every lesson of diligence and frugality, without being able to soften their present lot—all the comfort they have, which the labourer does not possess, lies in the hope of increasing their little stock enough to take a larger farm.

farm ; but this is not effected so often, as many people may imagine *.

Now if the value of people to the State, depends in any measure on their well-being or labour, I see no reason to rank the little farmer above the day-labourer : and the circumstance of having a family, belongs equally to both.

There is one point which is even unfavourable to them, that of not answering the calls of the government, when men for the public service are much wanted. In such times many labourers enter voluntarily into the service ; but no little farmers. Now this circumstance may, or may not be of any consequence ; but the fact is true. Indeed it would be attended with a good consequence, if, in such a case, all the men wanted were taken from among the manufacturers, because the more little farmers, the fewer labourers.

* “ I am here speaking chiefly of the lowest class of husbandmen ; the little farmers who rent 30 l. or 40 l. a year : such a man works and fares harder, and is in effect poorer than the day-labourer he employs. An husbandman thus circumstanced, is beyond dispute a worthy object of our commiseration and assistance.”
Essays on Husbandry, p. 205.

In short, we must conclude, that in respect of population, comfortable living, and labour, there is no difference to the State, between a little farmer and a day-labourer.

As to the farms of the second class; their occupiers are far happier in their circumstances, and of more real substance than those of the first. These men I consider as very valuable to the State; as the best nursery of occupiers for the third class; and who, as being removed from the very drudgery of their business, are enabled to *pay and maintain* some of that valuable set of men to the State, the day-labourers; those hardy robust people who are so able to bear great fatigues. These farmers, and their warm comfortable families, are of great consequence to the well-being of agriculture itself, if *considered* as the first step to perfect cultivation: the man possessed of wealth enough to stock a farm of this class, sets out advantageously to himself and the community: in one of these farms, he may, in a term of years, save money enough to advance into the third class; whereas, if there was nothing but farms of that rank, it would be a matter of
of

of too much difficulty among country people to get at them. The little farmer is always considered as the chief tiller of his land, and therefore his *farm* does not, properly speaking, maintain him, but his *labour* : now the set of men I am at present speaking of, are in a good degree independent of *hard* labour, and may therefore be reckoned as maintained by their farms, besides finding employment to day-labourers. Consequently, in respect to the value of the hands employed by this class of farms, I must conclude, that they are not only more numerous than the first class, but more valuable.

The third class of farms, *viz.* those which require from six to twelve horses to cultivate them, has hitherto appeared the most beneficial, both to the farmer and the public. In respect to the *value* of the hands employed, I must observe that these farmers themselves are men of the greatest consequence to the nation ; of more than any I have mentioned yet ; for it must be very evident, that great public benefit must result from the care, attention, and spirit with which these men expend considerable sums of money, in the most advantageous

I 3 manner

manner possible to the nation. They are also highly valuable in forming a desirable class of people between the two first sets of farmers, and the men of small estates and others, who cultivate small farms of their own. It is likewise to this set of cultivators, that a steady and beneficial employment of the poor is most owing. The other hands employed by these men are chiefly day-labourers; I have already spoken of *their* value, which is great; now this class employs more of them in proportion than the former, as every farmer with four horses hires one man-servant (always single) and others who keep ten or twelve horses have but two; some I have known with only one and a boy, the chief of all their work lying on their labourers; which practice they find more convenient in countries where cottages are tolerably plentiful. Now the employment of labourers, who are generally married men, is more advantageous than house servants, who are single: nor should we forget that this employment is *regular*; they have a constant dependance on their work; whereas, the lower classes employ them by fits and starts, only at busy times. From these considerations

rations I am clearly of opinion, that the hands employed by this class of farms are of greater value to the State than those employed by the former.

The next class, or very large farms, I have no reason to suppose so beneficial to the public, in the point we are now considering, as the last treated of. For those circumstances which raise the latter above the second class, do not rise in proportion to these: as the third set are of substance sufficient for a perfect cultivation. Now, these extreme large farms are oftener situated on a poor soil than a rich one, and consequently cottages are scarcer, and further removed from the farm-houses; the farmer therefore necessarily depends chiefly on *hired servants*, of which he keeps a number sufficient for working all his ploughs. This is a great prejudice to population, and did not immediately arise in the subject before. In the next place, *some* of these very large tracts of land would admit of being divided into several farms of the third class, which I think I have proved to be the most beneficial in every light: by which means the population *might* be increased; but the value of

population certainly would, in the additional farmers and their families. This is so extremely clear, that it will not admit of a doubt.

I therefore, under this head, *of the value to the State of the people employed by the several classes of farms*, draw the following conclusions, *viz.* That the *first* class is the least valuable in this respect of any; that the *second* is of great value, but much inferior to the *third*, which is superior to the *fourth*, and consequently the most beneficial in this respect to the State.

* * *

My fourth general division of the subject is, *the different advantage to the landlord of these several classes of farms*. Or if the case is put by way of question, I might say, Whether it is most advantageous to a landlord to portion out an estate into small, middling, or large farms, in the proportions I have stated in the classes? And whether any particular class is of any such superior advantage as to induce a landlord, with propriety, to alter an old arrangement on that account?

As

As to the first class, that of little farms, there are two circumstances to be considered; the largeness of rent in their favour; and the repairs of buildings against them. Much has been said concerning the breaking of tenants; but from the most attentive observation I have made, and the best intelligence I could gain, I have reason to believe this matter nearly on a balance between different sized farms; if a large farmer fails, the landlord, it is true, loses most; but then for one large farmer in such a circumstance there will be many small ones—supposing, I mean, that both are chosen with the same care by the landlord.

The greatness of the rent of a little farm, is, beyond all doubt, an object of no trifling consideration: and as one can only speak, in this respect, of things as they are, and not as they might be, were small farms more common; it may be found in value more than equal to the difference of repairs, when the buildings are properly contrived.

In countries where the generality of land in middling and large farms lets at, from twelve to fourteen shillings an acre, I
have

have observed that these little farms carry twenty shillings—a guinea—and sometimes more, an acre. However, a *great* superiority of rent is always to be observed. Now what a vast increase this is, must be apparent to every one—indeed a much greater advance, than can be made by any other means whatever.

The account between this advance and the expence of repairs in *some* farms may, I believe, be equal; but this must ever be owing to a ridiculous quantity of building: I have often seen barns, house, &c. large enough for an hundred a year, on a farm of not twenty. It may therefore be established as a maxim, that the gain by rent is often lost in repairs in these very small farms.

But on the other hand, I must observe, that a great number of them, which carry a vast advance of rent beyond the *medium* of the neighbourhood, have no buildings that can in the repairs balance that advantage. I have seen many of these with an exceeding small house, which might be built new for forty pounds—a very little barn containing a thrashing floor, and a small

small bay* for receiving the corn which is immediately to be thrashed; and a stack-floor for the produce in general. At one end a stable for two horses, and at the other a house for two cows: the whole building so exceedingly small, that is, so proportioned to the land, that one sixth part of the annual advance of rent is sufficient to keep it in repair. Therefore, when landlords act thus rationally, in regard to the buildings, I am fully persuaded that their profit from them would be greater than from large ones. It requires so small a sum of money to raise the buildings complete for a farm of twenty pounds *per annum*; that I am of opinion, where land lets for ten or twelve shillings an acre, the advance on parcelling it out into little farms, would more than pay the interest of the sums expended at first on buildings—pay the repairs—and leave a surplus at last for the landlord.—But the very contrary of all this is the case, when such small farms have more buildings than are

* All the divisions of a barn, except the porches and thrashing-floors, are called provincially *bays*. I know not what term in *English* to give them.

neces-

necessary.—These circumstances considered, I am much surprized at the practice of throwing little farms into great ones, unless the occupiers of the last agree, through a greedy desire of more land, to pay the same rent for them as the little farmers did. In that case there can be no doubt; but I should apprehend it would scarce ever happen.

The second class, those which are cultivated with four horses, seldom let at so high a rent as the first. But tenants being very readily to be had for them, I believe they generally pay more *per* acre than for larger farms. What I observed in the last article concerning the buildings, is in a good measure applicable to these: the profit of them, compared with larger or smaller farms, depends in a good measure on the repairs——if there are no more buildings then necessary, I apprehend this class to yield more profit to a landlord than any larger farms.

The third and fourth classes, consisting of large farms, and *very large* ones, are by no means let with that quick facility as the former ones: there are not near so many men whose pockets they suit, and this necessarily

rily occasions the land thus divided not to let so well, as when in smaller portions. But then, there is another circumstance to be considered, which regards improvement; if a landlord's estate requires it, these are the men alone who can effect that—the former classes are quite incapable of it: and that is more particularly the case with extensive farms on a poor soil which requires marling, claying, chalking, or any other expensive and lasting improvement. In these cases, the large farms are undoubtedly the most profitable. But if the land of an estate is already at its highest degree of goodness, or nearly so, then small farms answer in the manner I before observed.

* * *

There is yet another view in which farms should be considered, that is, *fifthly*, The number of horses kept upon them: and this circumstance is so exceedingly important, that too much attention cannot be given to it.

The farms of the first class cannot be managed without a pair of horses; be they
of

of the very smallest size: even five acres of arable land must either have two of these devouring beasts kept for their culture; or depend for common tillage, and even harvest work, on the accidental leisure of neighbours. This is one strong reason of small farms being attended with so little profit; for it is amazing that a man can keep two horses and live upon a farm of fifteen or twenty acres of arable land: he must inevitably be poor at least. This is his own concern; but what are the consequences to the nation at large! Instead of small farms increasing the people, they starve them to feed horses; for it will be very easy to prove, that the horses kept by large farmers, bear no proportion to those of the small ones. Let any one view a variety of little farms, and note the difficulties the occupiers are perpetually struggling with, in finding food for their horses——let him observe the proportions of whole farms that are set aside for horse-food alone; and he will find the quantity of land so appropriated prodigious.

The second class of farms have, in this respect, the advantage of the first; for they cultivate a larger quantity of land in
a better

a better manner, and with fewer horses. The reason of this, in a great measure, is their superior substance, which enables them to keep their horses almost constantly at work; for not being equally obliged with the little farmer to let them stand idle, while other work is going forward, they conduct two parts of their business at once—in one field they may be hoeing, mowing, &c. &c. and at the same time in another have their labourers or servants at work with their horses. By means of managing a little in this stile, a few horses do the work of a great many.

This class of farmers sows much more clover than the first; which not only prepares admirably for a crop of wheat on one ploughing, but rests a part of their farm every year, and consequently renders the fewer horses necessary.

Suppose a field sown with barley; let us calculate the difference between throwing in clover with it, as a middling farmer would probably do; and sowing it a second time with corn. The clover is certainly one year upon the ground, very often two, and sometimes three: Wheat is then sown upon one ploughing; from the time there-

fore of mowing the barley, the land requires but one stirring in two years.

The little farmer sows his barley without clover, next he sows oats on two ploughings; and after them, he in all probability fallows for wheat, stirring his field three times at least, but commonly four. But as such a one's fields are not generally tilled in great perfection, I will say only three: in two years he therefore ploughs five times, but the other only once: this is a prodigious difference, and all results from omitting the clover; a crop which by no means suits the little farmer, as he cannot afford the feeding off even the first crop. This contrast sufficiently explains the reason of a middling farmer not keeping a proportional number of horses with a little one.

All these points of superiority are yet stronger with the farmers of the third class. These men are rich enough to keep their horses at work the whole year, which makes an amazing difference: even in hay-time and harvest they will have men for ploughing as well as other work, to appearance, more critical and requisite: no business which requires men alone, stops their

horses for any considerable time; as they can perfectly well afford a sufficient number for all kinds of work, which is not the case with either of the former classes; and in respect to artificial grasses they sow them in much greater abundance.

Very large farms, I apprehend, keep yet fewer horses; most certainly on poor soils, for ray-grass mixed with clover, being the grasses they generally sow, and these always remaining much longer in the ground than clover alone, cause a material difference. Sainfoin, which lasts from ten to twenty years, is likewise chiefly sown by these farmers: nor should we forget the ease of ploughing in very light poor soils; the difference between these and the commonly heavy ones, being at least half.

I apprehend the following table of the horses kept by the four and twenty farmers, named elsewhere, will give more satisfaction than any reflections.

<i>Farmers.</i>				<i>Acres.</i>				<i>Horses.</i>			
No.	1	-	-	-	17	-	-	-	2		
	2	-	-	-	13	-	-	-	2		
	3	-	-	-	16	-	-	-	2		
Carry over				46				6			
				K				<i>Farm-</i>			

<i>Farmers.</i>	<i>Acres.</i>	<i>Horses.</i>
Brought over	46	6
No. 4	17	2
5	26	2
6	26	3
7	24	2
8	30	3
	167	18

Nine acres to each horse.

C L A S S II.		
No. 1	55	5
2	43	4
3	50	5
4	80	5
5	50	5
6	56	4
7	56	5
8	55	5
	445	38

Eleven acres and half to each horse.

5

CLASS

four and two oxen, or six or eight oxen without a Saddle.

<i>Farmers.</i>	<i>Acres.</i>	<i>Horses.</i>
No. 1 - - -	110	8
2 - - -	150	8
3 - - -	97	6
4 - - -	88	6
5 - - -	160	10
6 - - -	240	12
7 - - -	200	8
8 - - -	100	8
	1145	66

Seventeen acres to each horse.

This table is a stronger confirmation of the foregoing reasoning, than any thing else I could offer. But before I quit the subject, I should add one remark; which is, that in part of *Hampshire*, *Wiltshire*, and in *Oxfordshire*; in *Gloucestershire*, *Monmouthshire*, *Glamorganshire*, &c. &c. I found upon inquiry, in a late journey, that scarce a plough moved without four horses to draw it; generally five, and frequently six: very small farms are of course very scarce, for none can exist without four horses; or

four and two oxen; or six or eight oxen without horses. In those parts of the kingdom, the number of draught cattle, on *small* farms, must be proportionally larger than elsewhere.

Having gone thro' my five general heads of treating farms of every size, and given my sentiments concerning them, I hope to the satisfaction of the reader; I shall now speak of grazing farms, which, as they vary pretty much, in most particulars, from other farms, are best ranked by themselves. I shall consider them under the five heads of comparison I have already used.

* First, *the quantity of the produce, and the value of it to the farmer and the public.* And here the most sensible author of the *Essays on Husbandry* furnishes me with an indisputable maxim, which I adopt on his authority—namely, *That in any country where there is full consumption at home, or commerce for exportation, the best use the land can be put to, is to cultivate THAT crop, whatever it be, which produces the greatest profit* VALUED IN MONEY*.

Let us therefore compare the difference between the *profit valued in money* of grass

* Page 38.

farms,

farms, or common arable ones, with a portion of pasture belonging to them.— And I shall begin with little farms; not that I design to proceed regularly, as before, according to their size, but there are some observations to be made on *these* particularly.

I before remarked, that the little farmer works harder, and is to all intents and purposes as low in the comforts of life, as the day-labourer. But this wretchedness is totally owing to his occupying arable instead of grass-land. The plough moves at a vast expence in wear and tear, keeping of horses and labour: an expence far beyond the ability of men whose substance is so small; and requires a greater vigour in the culture than they can possibly give. Besides, the *uncertainty* of arable-crops is very great, which is a terrible affair to the little farmer, who has not a variety, that if one thing fails, another may make amends. Now all these circumstances are totally changed with grass-farms. They are managed at a small expence—there is scarce any wear and tear—the certainty of the produce is infinitely beyond that of arable land—and in fine, one horse is

sufficient to the very little farmer—and with the greater farmer one horse to grass-land is equal to four for arable*.

The difference between the man who occupies twenty acres of grass-land, and him who rents such a farm, as that quantity generally is, the greatest part arable—is immense; the one is for ever toiling and labouring excessively hard for a scanty pittance, with constant poverty; the other lives at his ease in plenty, and grows, comparatively speaking, rich.

The sum of money at first necessary to stock the arable land farm, and pay the expences of the first year, would be fully sufficient to stock the grass one with a dairy of cows, and a few hogs; or if there was no wife, with heifers or bullocks for grazing—or partly with such cattle, and partly with some fatting sheep.

But this being a point of considerable importance, requires something more than a mere assertion; for if grass-farms cannot be as easily stocked as arable ones, it is an evident reason for their not being so common; I shall therefore insert a few

* Or one ox, if any contrivance of making him draw like a horse in a collar is found to answer.

calculations to prove that this is not the case.

The mean number of arable acres in the eight little farms, mentioned page 110, is 20; I shall therefore state the stock of such an one, supposing the quantity of grafs commonly annexed to be five acres.

Stock necessary for an arable farm of the first Class.

	l.	s.	d.
Rent, tythe, and town-charges,			
25 acres at 25 s.	31	5	0
Household furniture,	12	0	0
A cart with ladders*,	10	0	0
Two horses,	10	0	0
Cart-harness for ditto,	3	9	0
Plough-harness for ditto,	1	8	0
A plough complete*,	1	10	0
A pair of harrows,	1	10	0
A rowl,	0	15	0
Sieves, screen, bushel, fan, shovels, pick-ax, forks, rakes,			
&c. &c. &c.	4	0	0

Carry over 75 17 0

* These prices are those of countries at a distance from iron mines and coals. In part of Gloucestershire, in Monmouthshire and Glamorganshire, a waggon costs not 8 l. and a plough but 7 s. 6 d.

K 4

Wear

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	75	17	0
Wear and tear, and shoeing, a year,	-	-	-
		2	10 0
Keeping two horses from <i>Michaelmas</i> (the time I suppose the farmer to enter) to <i>May</i> day, at 3 <i>s.</i> a week,		4	7 0
Seed for fifteen acres, the quantity I suppose him to sow every year, at 9 <i>s.</i> an acre on a medium,		6	15 0
Labour in feed time and harvest; a boy at 3 <i>s.</i> a week,		1	0 0
		* £	90 9 0

Stock of a grass farm of the first Class.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, tythe, and town-charges,			
25 acres,		31	5 0
Household furniture,		12	0 0
Carry over	43	5	0

* I reckon nothing for keeping the farmer and his family, if he has any that year, as such a calculation can be founded on no authority, and the proportion will be seen, as I shall reckon neither.

Dairy

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	43	5	0
Dairy furniture, - - -	2	0	0
A cart with ladders; a very flight one is sufficient, -	6	0	0
Cart-harness, - - -	1	9	0
One horse, not wanted till sum- mer; so no keeping, -	5	0	0
Forks, scythe, and rakes, &c.	0	10	0
Wear, tear, and shoeing, -	0	18	0
Seven cows at 4 <i>l.</i> each *, -	28	0	0
One sow, - - -	0	15	0
Labour in hay-time; a boy, -	0	9	0
	£	88	6 0

This sketch shows that the latter farm can be stocked for as low a sum as the former: but I am not solicitous to bring them to an equality; for supposing the grass to require ten or fifteen pounds more than the arable, or the arable as much more than the grass, such an excess is not of great consequence: It appears plain enough

* Some years this is a low price, but not at a medium: last spring, even good cows were sold, 80 miles from *London*, for 4 *l.* 10 *s.* and 5 *l.*

from

from these particulars that the difference of stock is very trifling; and that, when cows are to be purchased. If the grass should be very good, the calculation is low enough to admit 5*s.* *per* acre more of rent.

○ If the farmer is situated near a market town, or if he has no wife; hay and joisting the after-crop may answer better than cows; in which case the stock requisite will be at least 23*l.* or 24*l.* less: and even if it was grazed by heifers, a less sum would do.

○ Thus it appears, that a small grass farm requires scarce any thing in wear and tear — the farmer himself would be highly sufficient to perform the labour of it, with ease and pleasure. He would find either from cows, hay, or grazing, a far greater profit than in the common method; and in case of a bad year, he would not, when his return came in, have to pay half of it to his blacksmith, wheelwright, and an infinite variety of demands which the plough causes.

This doctrine, I am aware, will meet with great opposition from the warm advocates for arable land: there are many such, who will never allow that grazing is
equally

equally profitable. The practical experienced one, however, I am very clear, will be of my opinion. I could insert twenty accounts of the produce and expences of both, but I am fearful of being tedious: from the most accurate that can be made, the grass land is found to be infinitely the most profitable. The common answer to this argument, is the urging the universal practice of common farmers to break up whatever grass fields their landlords will permit: but this is no proof that arable land is most profitable—it proves only that there is a great profit on the *first breaking up* of grass lands; and this it is which induces them to plough fresh land, to a certain loss in ten or a dozen years—tho' profit for a short time*. Well therefore might M. *Raffinesque* say——“ Si l'on entre dans quelque détail sur ce sujet, on se convaincra bientôt qu'une trop grande quan-

* *Blythe* was greatly mistaken in the following passage, or things are much altered since the middle of the last century, “ Tillage, says he, yieldeth the greatest profit to landlord or occupier; study especially the good husband to convert the land to the best profit, and that is held and maintained by all men to be by tillage, else why do men give double rents to till and plough above what they do to graze?” *Improver Improved*, 1652, 3d edit. p. 146.

tité de terres labourées, relativement à nos prairies, *est une des premières sources de la pauvreté* du peuple de certaines contrées *."

And another author attributes half the evils of the *French* agriculture to a want of grass: "Plusieurs particuliers n'ont point de charrue, ils sont obligés d'attendre qu'il plaise à ceux qui en ont de cultiver leurs terres. Quand ils ont achevé leur propre ouvrage il est déjà tard, les mauvais tems surviennent, il faut semer bien ou mal avec précipitation. Plusieurs ont même quelquefois la douleur de se voir réduits à la dure nécessité de laisser en friche des terres qui devoient fournir à leur subsistance. D'où viennent tous ces maux? De la disproportion de nos terres labourées avec nos prairies †."——I conclude therefore, that it is infinitely more profitable to a little farmer to occupy an entire farm of grass, than have any thing to do with the plough.

The same assertion may likewise be ventured in regard to those who usually em-

* *Mémoires de Société de Berne*, 1763, première partie, p. 3. and for a farther confirmation see *Principes et Observations Oeconomiques*, tom. 1. p. 260.

† *Mem. de Société de Berne*, 1763. p. 10.

ploy four or more horses. The same sum necessary to stock one of their farms, would be highly sufficient for a grazing one; for two horses are the utmost they need keep in such a case; and instead of the heavy expence of a man, and boy servant and labourers, one boy would be sufficient—with a dairy-maid, if cows were the object—and if fattening cattle, the farmer himself without any assistance. But it is here necessary, as before, to aim at a proof of the assertion, that a grass farm in this class, is likewise stocked as cheaply as an arable one. For this purpose, the following calculation is submitted to the reader's candour. The mean number of arable acres in the eight farms of the second Class, is fifty-five: I shall suppose the grass to be upon a medium fifteen.

The stock of an arable farm of the second Class.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, tythe, and town-charges			
of 70 acres, at 20s.	-	70	0 0
Carry over		70	0 0

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	70	0	0
Household furniture *	30	0	0
A waggon,	25	0	0
A cart with ladders,	12	0	0
A tumbril,	10	0	0
A roll for broad lands	2	0	0
Ditto for narrow,	1	15	0
Cart-harness for four horses,	8	17	0
Plough ditto,	2	16	0
Two ploughs,	3	0	0
A pair of harrows,	1	15	0
Screen, bushel, fans, sieves, forks, rakes, &c. &c. &c.	8	0	0
Dairy furniture,	3	0	0
Twenty sacks,	2	10	0
Four horses,	32	0	0
Wear and tear, and shoeing, a year,	13	0	0
Carry over	225	13	0

* This article must rise with the supposed substance of the farmer : and the others which I calculate higher than for the little one, I imagine would be purchased of a more strong and substantial kind, than could be by them of Class 1.

Keep-

Brought over	£ 225	13	0
Keeping four horses from <i>Michaelmas</i> to <i>May</i> day, 2s.			
6 d. each a week †,	-	14	0 0
Five cows,	-	20	0 0
Twenty sheep †,	-	5	10 0
One sow,	-	0	15 0
One servant a year, board and wages,	-	15	0 0
A labourer a year,	-	20	0 0
Seed for 42 acres, the quan- tity he sows every year, wheat, spring-corn and clo- ver, at 11s. 6d. on a medium,	24	3	0
Labour in harvest,	-	1	10 0
	£	326	11 0

It is necessary here to remark, that few farmers on renting of a farm of 70 l. a year, have near such a sum as this total.

† This farmer's horses doing infinitely more work than those belonging to a little one, must be fed proportionally better.

† Old female sheep for fatting.

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If they possess a clear three hundred pounds, they will aim at one of an hundred a year at least, from a common notion that three rents will stock; and by means of buying all implements at second hand, weak horses, and poor cattle; and with trusting even for a part of the first year's expences to the year's produce, it must be confessed they do get into larger farms with such a sum; but then they most assuredly suffer, for not being *stronger* than their farms; wear and tear presently runs up excessively high, and the cattle are soon to be purchased again, insomuch, that numerous are the farmers who rent 120*l.* a year, and just manage to gain a living, who would have been worth money (to use a common phrase) had they *began* with 70*l.* a year. In the whole system of rural œconomics, there is not a more fatal rock, than that of renting to the utmost of what a man's substance will allow him. —I shall now calculate the stock of a grass-farm of this class.

Rent,

		<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, tythe, and town-charges				
of 70 acres, at 25 <i>s.</i>	-	87	10	0
Furniture,	-	30	0	0
Cart, with ladders,	-	12	0	0
A grafs roll,	-	2	0	0
Harnes for two horses,	-	3	9	0
Scythes, rakes, &c.	-	1	10	0
Dairy furniture,	-	12	0	0
Two horses,	-	16	0	0
Wear and tear, and shoeing,		3	0	0
Twenty cows,	-	80	0	0
Fifty sheep,	-	14	0	0
Three fows,	-	2	5	0
Labour in hay-time,	-	7	0	0
A boy a year board and wages,		9	0	0
		£.	279	14 0

The larger the farms are, the greater difference will be found between stocking grafs and arable: this sum is so much lower than that for the arable farm, that considerable additions may be made to it, on a different principle of farming it; for instance, suppose 25 or 30 cows kept, and but just hay enough made for calving-time,

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and straw bought for them all the other part of the winter. This is every where practicable; for I never was in any part of the kingdom, where barley and oat-straw (the only good sorts for feeding) were not to be purchased and bought in at a moderate price: and this method of managing grass-land, either for cows or fattening cattle, is of all others the most profitable; for a large stock of cattle is kept, and much manure made.

In very large farms, I do not apprehend it so profitable, to have nothing but grass. A small portion of ploughed ground to raise turnips, carrots, and oats on, in a course of husbandry, to have a crop of each every year, would be more advantageous, as by these means the feeding of cattle might be continued the whole year through, thus dividing the business, and having winter-employment for the few hands necessary, if a dairy was not the object, but if it was, more must be kept—and also raising oats for four horses, which is the utmost number that can be required, for, I may say, the *largest* of grazing farms: only excepting those which are turned to the dairy-business, in a country

try where the roads are very bad, as such a number would not then be sufficient, to carry full loads of cheese, and firkins of butter.

It is therefore extremely manifest, that in all soils rich enough to bear good grass, such farms are far more profitable than arable ones, let the quantity of land be what it may : or in other words, the *value* of the earth's productions (all expences paid) is much greater in grass farms than arable ones ; unless they are situated on a poor soil.

The second head, under which I am to consider grazing farms, is *the number of people employed*. In this respect, the case is determined in an instant ; it is tillage which maintains great numbers of men : indeed the vastly superior profit of grass-land, is in a good measure owing to the few hands required to manage it. Most authors have been sensible of this ; “ Les païs, says *Montesquieu*, de pâturages sont peu peuplés. Les terres à bled occupent plus d'hommes, & les vignobles infiniment d'avantage. En Angleterre on s'est souvent plaint que l'augmentation des pâturages

diminuoit les habitans *”—But he soon after observes—“ Enfin la terre qui est employée ailleurs a la nourriture des animaux, y sert immédiatement à la subsistance des hommes; le travail que font ailleurs les animaux est fait là par les hommes, & la culture des terres devient pour les hommes une immense manufacture.”

—And M. *Carrard* observes, “ Plus on a de terres labourables, plus aussi la quantité de subsistance, le commerce, les occupations & par conséquent la population augmentent dans un état †.”

I shall not take up the reader's time in dwelling on a point, the certainty of which is so extremely evident, *viz.* that grass-farms, of whatever size, are greatly inferior to arable ones in the employment of people ‡.

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* *De L'Esprit des Loix*, tome ii. p. 120. Liv. 23. chap. 14.

† *Bern. Mem.* 1765. Vol. 2. p. 242.

‡ Notwithstanding the manufacture carried on in consequence of them, of leather and wool: in this observation I think I am consistent, as I before remarked the benefit to population arising from breaking up sheep-walks. A late author calculates the *proportion* of populousness between grass and arable.—“ The proportion,”

As to the third head, concerning the different value of these hands to the state, it is nearly the same in both arable and pasture-farms; the difference only consists in the number; but if such difference should be found, I apprehend it is in favour of arable ones.

Fourthly, in respect to the different value to the landlord: That is certainly most advantageous to him, which yields the best rent, with the greatest probability of continuance. Now, whether he portions

portion," says he, "of people employed in agriculture, and upon the account of it in different countries is nearly in the ratio of the gross produce of the land rent; or in other words, in the proportion of the consumption made by the farmers, and of those employed necessarily by them, to the nett produce, which is the same thing. Now, as the consumption upon corn farms is $\frac{7}{9}$, and that upon pasture $\frac{5}{12}$; the proportion of these two fractions must mark the ratio between the populousness of pasture-lands, and those in tillage; that is to say, tillage-lands in *England* were in *Davenant's* time peopled in proportion to pasture-lands, as 84 to 45, or as 28 to 15." *Inquiry into the Principles of Political Oeconomy*, Vol. 1. p. 43. This proportion, by the by, is nearly that of the two farms of 70 acres, calculated above: In the arable one, the farmer, a labourer, and a servant, which are three: In the grass; the farmer and a boy; and reckoning the boy at half the value of a man, that is, $1\frac{1}{2}$; three to $1\frac{1}{2}$ is as 28 to 14, but then the 15 acres of grass in the arable farm makes some difference.

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out his estate in small, middling, or large farms, the grafs-ones will, beyond all doubt, bring him most rent, and that in no trifling degree of superiority. I think I have proved sufficiently, that they are by far the most profitable to the tenant; it is therefore highly reasonable that they should be the same to the landlord. In fact, good grafs-land generally lets better than good arable, unless it be immediately on the breaking up for the first crops, which is an exception to any general course of farming. The best grafs always lets for more money than the very best arable. Another circumstance of importance, is the article of buildings: grafs-farms require few or none besides the dwelling-house; and this saving in repairs is prodigious--that very article being sufficient, (as I before observed) in small farms, to balance six or eight shilling an acre rent, as buildings are commonly managed. It is further to be remembered, that a bad tenant, under a negligent, or ignorant landlord, or one who resides at a distance from his estate, cannot ruin a grafs-farm by continued cropping, or very bad husbandry in other particulars, as is too often the case in arable ones, so circumstanced.

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It may be said, that tenants are in general bound by their leases to abstain from such practices; but common observation may convince us, that leases are far from being sufficient to prevent such evils, when the soil has the misfortune to be cultivated by slothful or ravenous occupiers. But supposing a tenant acts according to his lease, no leases bind him in such a manner, as to be sure of preserving the arable farms in as good condition as they must the grass-ones: for although there is a vast difference between the good and ill management of the latter, yet it is far from being equal to the former; and we should consider, that tenants will ever be ready enough to break up grass-land after any farmer——but none can be found that will lay down arable to grass after a slovenly one——for land that is exhausted by cropping too often, and slovenly management, will be a long time before it yields a good turf.

The advantages attending pasture-farms, to a landlord, are, indeed, so superior, that I know of no rural improvement greater, than when leases are out, to get the arable lands into fine order, to lay them down in

good heart to grafs, and then to re-let the same farms. The rise of rent will be very considerable ; far more than sufficient to pay all the expences. And in this new state, the fields will remain permanently good, and not be liable to have their very heart exhausted again.

In fine, from every consideration which occurs, there is the greatest reason to advance as an undoubted fact, *That grass-farms, of whatever size, are by far the most advantageous to landlords* *.

Fifthly, as to the number of horses kept upon them, it bears no proportion to the number of those maintained on arable farms. We find above that in 70 acres, the difference is two to one. In the scale of farms and horses, at page 131, it appears, that one horse is kept to every 17 acres : In one of 510 acres therefore, 30 would be kept ; whereas, if the 510 acres were grafs, four would be highly sufficient : This difference is as fifteen to two ; grafs and arable land, therefore, will bear no comparison in this respect.

* I before mentioned, *on a rich soil*. As to sheep-walks, the case is different ; which point, I think, I sufficiently explained in my parallel between such tracts of land in their common and improved state.

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By way of conclusion to these remarks, I shall draw some corollaries from them, which will set the subject in a clear light.

FIRST, That small farms are detrimental to the occupier and to the public, in the smallness of their produce, and the number of horses kept on them: rather injurious than otherwise to population; and very deficient in valuable hands: but of superior advantage to landlords, when not incumbered with unnecessary buildings.

SECONDLY, That middling farms yield a superior (proportional) produce to the small ones——maintain more people, and of a more public value; keep fewer horses, and are more advantageous to landlords, than any larger farms.

THIRDLY, That large farms, in respect of produce, are more beneficial than any——more advantageous than any to population, in number, and the value of hands; keep a less number of horses than either small or middling ones, but are not of equal profit to landlords with such, unless situated on a poor soil.

FOURTH-

FOURTHLY, That very large farms do not in general produce equal to the last class,—nor maintain an equality of hands either in number or value; nor are they of so great advantage to landlords, as the first and second classes, unless situated on a poor soil; but keep fewer horses than either of the preceding.

FIFTHLY, That grass farms are, in respect of produce, by far more beneficial than arable ones; infinitely less advantageous to population, in point of number of people, but equal in respect of their value; require not a seventh part of the horses, and are by far the most beneficial to landlords.—Poor soils in every article excepted*.

* I cannot reconcile the sentiments, in the following passage of a well known *French* author, “ La multiplicité des fermes qui dans les pays riches deviennent tous les jours moindres en nombre, en proportion de l’affermé, par les réunions que font les propriétaires pour diminuer les frais d’exploitation: en sorte que mille livres sterling de fermages dans des terres mauvaises on médiocres, feront subsister trente à quarante ménages de laboureurs, tandis que dans un pays riche elles en employeront à peine six.” *M. Danguille’s Avantages & Desavantages de la France*, &c. p. 276.

I flatter myself that these maxims, if they have not that perfect accuracy I could wish, will at least pave the way for more fortunate inquirers, to give the public a more determinate knowledge of this important subject, than is common at present. And now, having stated the different public and private value of the several kinds of farms, as nearly as I am able; I shall proceed to some general practices in agriculture, common in every class, and aim at pointing out the means of advancing its present state nearer to perfection. In treating of which points, I shall naturally illustrate several passages of this letter, which to some may not be so clear as I could wish it was to all*.

* The reader, I hope, does not accuse me of inadvertency, in omitting *wood-farms*: they not being very common, and their properties relative to my four general heads apparent enough. Of timber I shall speak anon.

LETTER IV.

IT is a matter of infinite consequence to the nation, that every husbandman in it should cultivate his farm in a neat and masterly manner ; that no part of the soil may be exhausted by noxious weeds, and prevented from yielding its full produce : or, in other words, that every farmer may be enabled by his profit to proceed in his business with spirit : for if he does not make a reasonable profit, the State must suffer. It is therefore highly important, that such courses of agriculture be recommended to them, as will tend to advance the rural œconomy of this country to the highest pitch : such courses as are practised by the few who have a true idea of experimental husbandry.

One of these chief points which tends to render husbandry profitable to its professors, is a due proportion between the arable and pasture-lands of a farm. Without this advantageous proportion, there cannot be that general benefit, which arises from a judicious *arrangement* of a farm.

farm. I have already proved the greatly superior profit of a grazing one; and all the arguments which I *then* used, are of force *now*, in showing the benefits of any quantity of pasture. It is a miserable thing to have the farmer depend entirely on the plough for his All; especially the little or middling ones. By having a proper quantity of grass, his dependencies are divided——he is not so liable to be totally disappointed in his crop——his immediate profit is much greater, and his consequential benefit greater still. For it is his pastures which maintain cattle——and it is on cattle he depends chiefly for a sufficient quantity of manure. But when all, or nearly all the land of a farm is arable, it is twenty to one but the soil is quite exhausted in a term of years, unless the management is very masterly, and the *purchased* manures considerable.

From the best observations I have been able to make, I have great reason to believe, that half the lands of a farm, but more particularly of a small or middling one, ought to be grass. A multitude of advantages result from such a division; both arable and pasture then mutually
assist

assist each other in forming a great quantity of manures. The arable, in furnishing turnips for the winter-subsistence of the cattle, and straw for them to make into manure; the grass, in maintaining cattle in the summer ready for spending the arable-produce of fodder, straw, &c. And without this division of a farm, the occupier must suffer. It should be remembered, that clover will not answer the purposes of natural grass; for I know of no cattle that can be fed to advantage on it but horses, sheep, and hogs——neither cows nor neat cattle. But in this case, as before, I always except farms situated on a poor soil. Those small farms which have two thirds, or three-fourths of the land grass, would be yet more profitable to the occupier——but, as I before observed, not so advantageous to population.

* * *

Another circumstance, which depends on the farmer's management, and is of no small consequence, is the arranging his lands properly for his crops. It is common in some countries to sow little besides wheat;

wheat; having nearly one half of the land under that crop, and the other half fallow, for the reception of the next year's. And in others, where this practice is varied, it differs chiefly in sometimes sowing oats—and in others, barley. However, the fewer the divisions of the farm, the less in general the profit.

It must be obvious, that the fewer the divisions of a farm into different crops, the more horses must be kept for cultivating them; because the business of sowing comes too much together, and if a sufficient strength of ploughing-cattle is not kept, the season will pass without the seed being in the ground; and the consequence of that, is the land's being sown at an improper time. Whereas, if a division of the farm is made into a variety of parts, for different crops, the seasons for sowing them being different, the fewer horses will do. For instance:

Suppose one hundred acres of arable land belonging to a farm, be divided into three portions of thirty-three acres each, one sown with wheat, one with spring-corn, and the other fallow; the horses must necessarily, at any sowing-time, have
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that quantity of land to cultivate at a time: this is seldom done in common, with less than six horses, or three ploughs, and often with four: and in ticklish seasons it will require that number. Let us now inquire what number will do if differently managed.

One hundred acres of arable land might be cultivated with one plough and a pair of stout horses, by dividing them into eight portions: but as two horses would be insufficient for carrying out manures and other carting, not less than four would be entirely proper; but that number would fully answer every purpose. The land should be divided thus: of each $12\frac{1}{2}$ acres.

1. Beans, sown in *February*. 2. Black oats, the latter end of *February*, and the beginning of *March*. 3. Barley in *April*. 4. Turnips in *June* and *July*. 5. Wheat in *September*. 6. Pease in *October* and *November* *. 7. A clover-lay, one year old. 8. Ditto, two years old. By means of such husbandry, the land will always be kept clean, and in heart, because the crops which impoverish the earth, those of wheat, barley, and oats, are not out of proportion to the rest.

* It is a common practice in *Suffolk* and *Essex*, to sow grey pease as soon as wheat-sowing is over.

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I leave it to the reader to judge what a saving it is to the farmer, instead of six or eight horses, to keep only four; and to fat four heifers, or oxen, or keep four cows, in the room of the four useless horses. That such a saving would be very considerable, is apparent on the very first view: and I am well satisfied that the attentive observer in most countries will remark, as great a loss as this I have stated in the article of useless horses.

Horses are kept at such a great expence, that it is to be wondered husbandmen in general, do not, in that respect, better see their own interest: for they ought always to be employed, or they can never pay for their food; and in the common manner of managing a farm, they stand still a great part of the year, for hurrying on the business of a few weeks at the sowing-times, which tends to the great impoverishment of the farmer.

But he does not suffer only in the useless horses he keeps, but in the haste with which he ploughs and sows his land—for having a great deal to do in a short time, most of it must be incompletely done, notwithstanding the number of his

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horses;

horses; and in the articles of harrowing and rolling, he is very deficient; whereas, if he was to vary his crops more, he would of course have more time for each, and all would be consequently better conducted. There is not a more pernicious piece of ill management in husbandry, than by dilatoriness, or other means to be straitened for want of time; the work is never well done—the land is ploughed wet—harrowing is omitted, and the soil, instead of yielding a beneficial crop, is filled with trumpery and weeds for years to come. Whenever a farmer is in such a situation, he had infinitely better let alone sowing the field, though it be for a year. In all the extent of husbandry, there is not a more important truth than this; nor is any thing more common than such bad management, in barley seed-time particularly: heavy rains are then frequent, and land which has been carefully ploughed, harrowed, and laid dry ready for the barley-seed, is prepared at such an expence, that few farmers can persuade themselves to forbear sowing. But I have often observed, and experienced it in my own practice, that one very heavy shower of rain,

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coming just upon a harrowing, or while the field is ploughing, and the seed possibly sown, has destroyed the crop; infomuch, that land which ought to have yielded four quarters *per* acre, has not produced one. In lands, whose surface bake with a hot gleam of sun, after much rain, this is universally the case; and frequently with all soils inclinable to wetness, though they have not that quality. When rain comes in this manner, the farmer goes home with his teams, and leaves the field until it is dry enough to proceed, and then the sowing business goes forward; some slight showers come; it is late in the seed-time, and he cannot regard these; the season, upon the whole, is very wet; but the ground is seeded and left to its chance. A very poor crop is the infallible consequence; if the farmer gets one quarter, where he had reason in a dry time to expect four, he is well off.

I must here beg leave to remark, that the case I have been stating is by no means an uncommon one: last barley seed-time excepted, there has not been a favourable one to soils wet, or inclinable to moisture, these six years; for of a variety

of fields, I have carefully remarked, both at seed-time and harvest, I remember not one *capital* crop of barley raised in any one that was not seeded quite dry, and a week at least, or ten days dry weather after the sowing. All the good crops of this grain in bad years, on clays, or heavy loams, or binding gravels, are those which were sown early, before the heavy spring-showers.

The consequence, therefore, of not varying crops, is surely evident: instead of sowing twenty acres of beans and pease, and 20 of barley, the farmer sows 40 of the last; this hurries him at a time when every moment is precious; if a rainy season comes on, this crop is lost. It matters not having ploughed his land for a twelve-month past, made it clear of all weeds, and garden fine; one week of very wet weather at seed-time would ruin the crop upon a fallow of seven years.

But if the crops are varied, yet some land must be left for barley; and with many ploughs; and but little land to sow, I have more than once in wet seasons lost my crop, and found many neighbours in the same predicament. Whenever I am again caught

caught in such a wet seed-time, I shall certainly leave the land for turnips or wheat, even if the fallow is a year and a half old: I would persuade every one to do the same, for the benefit of the practice I am clear would be very great: nor should the land's being sown, occasion a different conduct; three bushels of barley cannot be valued at more than 7 s. 6 d. suppose we say four bushels and 10 s. this loss is trifling in comparison to that of suffering half, or a quarter of a crop, to occupy land that is in excellent order, and which would certainly produce fine turnips or wheat*. But if the farmer cannot bring himself to pass by a spring-sowing; the great thing wanting in this part of husbandry, is some crop that suits moist and wet land, and that will bear sowing so late as the latter end of *May*, or beginning of *June*: such a succedaneum would be of incomparable value, when a wet season had rendered the barley-sowing dangerous, or deferred it till late, which is the same thing. Buck wheat is

* Nothing of this case is applicable to the wheat seed time; besides the season of this climate is nine years out of ten more settled than in the spring. Our summers now begin in *August* or *September*.

precisely the crop on light lands, but will not do on heavy ones; nor does the cause operate in the manner above described, on light soils, which will bear rain at any time so much better than heavier ones. Oats, pease, beans, and tares should all be sown, even before barley.—I beg leave to recommend the consideration of this defect in our agriculture, to the excellent author of *The Essays on Husbandry*: He who has been so observing on the culture of almost all *Europe*, may possibly have remarked some crop that would answer our want.

* * *

Horses are so extremely expensive in the food they require—in the expence and wear of their harness—in their shoeing—and above all, in the variety of disorders, lamenesses, and deaths they are subject to, that I think it is of vast consequence both to the farmer and the public to extend the use of *oxen* for all rural business.

Oxen are kept infinitely cheaper than horses. Their harness and shoeing cost less—they are not near so subject to illness

and being lame——and if lameness does overtake them, or they grow too old for work, they then remain fit and ready for fattening. Their summer food, like that of horses, consists of grass but without any hay or oats: in winter, good straw and turnips, or carrots; if no roots, then hay alone. In respect to attendance, the difference between horses and oxen is very great; one stout lad is sufficient in a convenient ox-house, to take care of eight or ten oxen, they requiring no other attendance, than putting their fodder in their racks, and cleaning the house; no rubbing or currying or dressing, which with horses takes one man to every four or five at most.

The harness of oxen (that is their yokes, bows, and chains) cost less by two thirds than the harness of horses, and what is as material, require scarcely any repairs; whereas the horse-harness, every practical husbandman knows, is a constant rent-charge; every part of it constantly going to pieces, and not mended under a great expence. The shoeing is equally in favour of the oxen, not costing so much as that of horses, and lasting longer.

The circumstance of fattening them when past work, is of most material consequence. It is well known how great a loss a farmer suffers that keeps many horses, by their dying and becoming disabled. In a large business this, in a term of twenty years, becomes an object of great importance, and were it divided, would make a considerable annual charge. Now with oxen the case is totally different. If accidentally they get lame, to which, however, they are not so subject as horses, or when they abate of their vigour at work, the farmer fattens, and sells them as well as the best—and no beasts fat kindlier than those which have worked.

It has been objected, that oxen are not proper for all work—and in the horse-counties there is quite an abhorrence against their use: it is there asserted, that they are by no means equal to horses. But I have, myself, found the contrary, as well from my own experience, as the information I have gained from the best hands. A pair of stout oxen will plough as much as a pair of horses, and, unless the horses be strong and steady ones, carry a deeper and truer furrow. But when we
read

read in *Liste* of eight and ten oxen to a plough, it raises one's indignation. Either the ploughs, at that time in *Hampshire*, must be of a ridiculous construction, or the soil rock itself. I have, indeed, found in other parts of *England*, that it is yet the practice to plough with a great many oxen at a time: but, as I remarked before, I have experienced in several soils, that where a pair of stout horses plough an acre a day, a yoke of oxen has always done the same.

They are precisely as convenient and effectual in all other rural business: in the waggon, in carts, and tumbrils, in rollers, &c. &c. &c. and used with as much ease and handiness as any horses.

One additional expence attending them, it would, however, be unfair to suppress: a pair of horses in a plough requires only the ploughman, but a yoke of oxen must have a boy also to drive them. In the ox-counties this expence amounts to a penny or three halfpence, I am told, *per* journey of eight hours: but where I have any knowledge could not be procured in the villages under two-pence or three-pence, and sometimes a groat: but clear I am,
that

that this additional expence (when at plough) does by no means reduce them to a par with horses: But if a great number of ox-ploughs were kept in some places, I doubt whether the procuring driving-boys, would not be a difficulty: and this circumstance ought to induce some cultivator that works a great number, to try if they could not be guided by a line like horses.

I am the rather induced to hint this, as it is the actual method in use, in the province of *Poitou* in *France*; where the ploughman not only holds the plough, but drives the oxen*. Such excellent customs are of great value; for savings of this sort, are matters of no slight consequence, to a hard-working frugal cultivator; besides, the teaching beasts such a docility, is a pleasing piece of ingenuity, and I am persuaded, is no difficult matter to effect.

Lastly, the public is nearly concerned: for among the many causes that are daily mentioned, to occasion a high price of butchers meat; I have not heard the great number of horses that are kept, assigned as one. I have reason to believe the number

* *Princ. et observat. æcon.* tome 2. p. 57.

of them increases greatly in most parts of the kingdom: this is an immense loss to the community, in the vast quantities of horse-meat raised on land, where more valuable corn for exportation might be cultivated, were the work in general performed by oxen; and not only so, but the oxen themselves would be perpetually coming to the shambles, yielding thereby a great increase of butchers meat; but this is never the case with horses—their carcasses are consigned only to the kennel.

A late author is of an opinion very contrary to all these sentiments. The passage is an answer to a supposed objection—
 “Obj. A multitude of superfluous horses are kept in *Paris*, which consume what would feed many more inhabitants. Ans. True; but he who feeds the horses, because *he thinks* he has a use for them, would not feed those inhabitants; because *he is sure* he has no use for them: and did he in complaisance for the public, dismiss his cattle, the farmer who furnishes the hay and oats, would lose a customer, and nobody would gain. These articles are produced because they are demanded: when additional inhabitants are produced, who will demand
 and

and can pay, their demand will be answered also, as long as there is an unemployed acre in *France**."

This reasoning is fallacious enough; on one side of a street lives a customer who buys oats for his horses; on the other hand a merchant who buys wheat for exportation; now if the demand for oats decreases, the farmer sows more wheat, nor is he in danger of a want of a market, for exportation is almost boundless. It is ridiculous to imagine, that if the consumption occasioned by horses drops, the land which used to be applied to the raising of oats would necessarily remain useless. Let us suppose the inhabitants of *Paris*, in the whirligig of fashions, to adopt a whim of having their coaches drawn by oxen; The horses are all turned off, and the demand for oats at an end: More profitable grain would be sown instead of them, and a vast quantity of butchers meat would yearly come to the market, and if not eat at home, would be sold to foreigners. And so far from *no-body's being the better for the great*

* *Inquiry into the Principles of Political Oeconomy*,
Vol. I. p. 145.

man's dismissing his horses, the whole nation would be benefited; more wheat would be raised, which being exported, would not only bring much money into the kingdom, but ensure a plenty for the home consumption at all times.

In the table of the growth, &c. of corn, p. 57, the consumption of oats amounts to upwards of four millions two hundred thousand quarters, more than the growth of wheat. Think what an immense sum is lost to the nation in the vast quantity of land taken up to raise this grain. Much of it, I know, of a poor sort not fit for wheat—but infinite tracts that are—and most of it proper for barley. I have already shewn, that the nation has, in fact, profited by the annual exportation of rather more than four hundred and twenty thousand quarters of corn of all sorts, above the sum of *one hundred and forty millions sterling* in less than seventy years. Now compare this quantity of corn with our consumption of oats, which amounts to more than ten times as much. Think but of doubling that immense sum by only decreasing the land sown with oats (for seventy years) *one tenth*, and instead thereof,
 sow-

sowing it with barley, rye, or wheat. But to talk of one-tenth is absurd; why may we not, in the next seventy years, take a third from this monstrous tract of (I may say) useless land? What a mine of wealth would it produce, if cultivated to the purposes of exportation!

This immensely important object of public welfare can, in any degree, be effected only by reducing the number of horses used in husbandry, and substituting oxen in their stead. The infinite variety of beneficial effects that would result from this alteration are manifest; and if the reduction of the prices of provisions is an object of earnest attention, there is no method so sure and eligible as increasing the number of working oxen. A very small reduction of the number of horses, and using oxen instead of them, (for instance, one tenth part) provided the land sown with oats to maintain them, was sown with wheat, rye, and barley for exportation, would not only give a great increase of butchers meat, but also yield at the lowest, one million and a half annually clear profit to the nation.

For

For we should consider that a vast proportion of the land, which bears this immense quantity of oats, being rich, and able to produce wheat—a great deal of it proper for barley, and nearly the poorest of it sufficiently good for rye; a proportion of it may certainly be deducted on paper without the imputation of arranging lands for exportable corn, not good enough to bear it. I am also sensible that it will be objected, to be impossible always instead of oats, to sow wheat, even on wheat-land, because oats are frequently sown after wheat. But then it should be remembered, that the farmer's keeping a number of horses renders an oat-crop absolutely necessary: in determining the course of his fields; he fixes on a certain quantity of land for oats, which must be raised, or bought, a thing few farmers like: and if he be a good husbandman, he will abhor the practice of sowing so voracious a vegetable after wheat, but sow them after a fallow or some meliorating crops; indeed oats, by a prudent neat farmer, are never sown on land which would not produce either wheat, barley, or rye.

But

But supposing they are generally an after-crop; there is an infinite difference to the public, as well as the cultivator, between sowing them, or beans, pease, or turnips, because, after a good crop of pease or beans, in rich lands, wheat is again sown, and after turnips barley. But when oats come in between, the soil is thereby so impoverished, that a fallow must ensue, before any exportable corn can again be sown.

A slight calculation will manifest the prodigious benefits arising from converting a part of the oat-land to the growth of wheat. Upwards of 1,400,000 acres are sown every year with oats :

A third of the quantity is			£.
upwards of 470,000 acres,			
which sown with exportable corn, and yielding two			
quarters and half <i>per</i> acre,			
at 22 s. * is,	-	-	1,292,500
Freight at 40 s. a ton,	-	-	391,600
			£. 1,684,100

* The average price of exportable corn, for the 68 years, is 1 l. 2 s. per quarter:

This

This is a slight sketch, but the result is of no little importance. We find that diminishing the number of our horses only a *third*, and substituting oxen in their room, would not only make a prodigious plenty of butcher's meat ; but bring above sixteen hundred thousand pounds a year, clear into the nation's pocket.

From all the reasons that can be urged in any respect, to this point, of the difference between keeping horses or oxen for the business of husbandry, we have the greatest reason to believe, that many very important benefits would result to the private occupier, and also to the public.

1. The farmer would cultivate his land cheaper.
2. His fields would be much cleaner, and in better heart.
3. The price of butchers meat would be reduced to the public.
4. An immense profit would likewise accrue to it in a prodigious increase of the exportation of corn.

LETTER V.

IT is allowed by all politicians, that the prices of the necessaries of life, ought, in well regulated countries, to continue even; be as little subject as possible, to sudden rises and falls; and remain at such reasonable rates, that the lower classes of *industrious* consumers may constantly command a sufficiency without the producers being injured by a too great cheapness. It is of great consequence, that the working part of a nation, employed in manufactures, trade, and navigation, be able to maintain themselves by their industry, at their usual prices; as an increase of wages must occasion an increase of the prices of manufactures; and a probability necessarily ensue, that foreign rivals may put an end to the sale to foreigners. These maxims are generally received without contradiction; but in the explanations which are given them, various different constructions are used, which appear, at first sight, very simple: Provisions, it is said, should be *cheap*:—But what is being cheap?

cheap?—Is it that workmen should be able to live on the product of six days *hard* work?—On that of six days *easy* work?—On that of five days and an half?—Or five? Is the product of six, or five, or four days to be allowed them; reckoning 9, 10, 11, 12, or 16 hours to the day? Is cheapness of provisions the ability they have to live upon mutton, beef, strong beer, and the best wheaten bread? Or upon the best bread, and cheese and ale? Or household bread and cheese, and ale? Or is it in general, that their earnings be sufficient to keep them in full health and strength, by various species of provisions, according to the various prices in which they fluctuate;—so that in the dearest times, *some articles* may be cheap enough for their purse?—Or is it that they may live as cheaply as foreign workmen?—Or are the prices of provisions dear or cheap, as they rise or fall, above or below the preceding prices of certain ages, reigns, years, &c.—Or Lastly, Is it when manufacturers riot?

I would not have it thought that I stop these queries, because I can advance no more; I could easily multiply them to the

size of a volume; but these are sufficient: all the answer which I can discover among those, who are loudest in their complaint, is, in one word; *Provisions are much too dear, and manufactures are ruined.*

Various occasions for this dearness are alledged; and for the sake of perspicuity, I shall, for the present, without examination, suppose the fact, and inquire into the causes commonly advanced.

I. The union of farms.

It is needless to quote every author that has attributed the dearness of provisions to this cause amongst others: one of the pamphlets on the occasion, says—"The monopoly of farms produces, not only a *scarcity of corn*, but of most other provisions, as *butter, cheese, eggs, poultry, pigs, &c. &c.* not to mention several other necessaries depending on the breed of cattle, *viz. candles, soap, leather, &c.*" I take this passage particularly, because the terms used in it, will save my producing any other.

That the turning small farms into large ones, *does not* occasion a scarcity of corn; I flatter myself I have proved sufficiently elsewhere, in shewing that their produce is much less considerable, acre for acre,
than

than that of large ones. But how, in the name of goodness, can little farms give plenty of commodities, which they do not produce; such as *cattle*, *butter*, *cheese*, and *pork*! small farms produce scarce any of these: the first class *none*. The second very few compared with the large farms. *Cattle* and their consequences, such as leather, butter, cheese, &c. &c. are scarce ever kept by *little* farmers. In case a cow is in the yard of such an one, she is as certainly a poor stunted beast. And as to *fatting* cattle, it is an absurdity to imagine they can keep any. Even the second class are greatly deficient in these articles: but the large farms, and very large ones, maintain great dairies, and numerous *fatting* beasts; and occasion the plenty of all provisions, which depend upon *cattle*. If the whole kingdom was split into small farms of 20 *l.* 30 *l.* and 40 *l.* a year; so far from a greater plenty of these articles ensuing, we should have scarce any, *while such farms were cultivated as they are at present*; indeed the dearness which they would occasion, would soon cause an alteration; and landlords would find, they must either have entire farms of grass, or large ones. Compare

15 or 20 cows in one yard, with as many in seven or ten yards; the former will give three times the quantity of milk.

With regard to pork, this difference is yet more striking; hogs can only be kept in any number, (whether by great or small farmers) where there are *cows* and *clover*; which articles are scarce ever found in small farms: A farmer, of 200 *l.* a year, with a dairy of 30 or 40 cows, and 40 or 50 acres of clover every year, breeds and keeps ten times more hogs than ten farms, each of 20 *l.* This fact is so self-evident, and so universally true, that I am amazed any one who was ever within the walls of a farm-yard, can advance such stuff, as the above-quoted assertions.

But, say they, no roasting pigs are brought to market by *large* farmers.—True; and if you would have plenty of pork, don't suffer *little* farmers to carry the few they have thither. The latter slaughter the whole breed to sell at market, at half a crown and three shillings a piece to shop-keeper's wives and such people in towns: but the great farmers not wanting such small supplies of money, keep them to their full growth; and drive them to market,

ket, by 30 and 40 at a time: I should be glad to know which occasions the greatest plenty of pork. This I conceive, that were *England* divided into farms of 30 *l.* each; in seven years common pickled pork would be 2 *s.* and 2 *s.* 6 *d.* a pound.

Lastly come the articles of *eggs* and *poultry*, which have been banded about, in, I believe, an hundred pamphlets, as arguments for small farms. And to grant all these authors can desire, let me ask them one plain question; Of what national good is the cheapness of poultry? Is it of six-pence consequence to the public, whether the consumers of poultry buy a turkey for 3 or for 13 *s.*? Of what benefit would it be to manufacturers, and the labouring poor in general, to have chickens sold at market 19 *per cent.* (the rise talked of in provisions) cheaper than they are at present? Or would you have a poor man be able to buy a fat fowl for 2 *d.* as he might have done some hundred years ago? If this is your opinion, do not advance any thing in favour of trade and manufactures; for if provisions were so cheap, (and there must be a general level) adieu to both: to possess a flourishing com-

merce, and thriving manufactures, is as incompatible with such a cheapness, as the meridian sun with darkness of the night. Nothing can be more truly the language of prejudice, than this haranguing upon the dearness of poultry, as a public misfortune; all those who chuse to eat such food, must take care that they can afford it; and if they go without, and eat mutton instead of it, I desire to know of what consequence it is to the public?

One author complaining of the price of poultry, brings in fish*, which reminds me of the sums *granted by parliament*, to the land-carriage fish-scheme, and the Society's adopting it: all this was much in the stile of lowering the price of poultry. Of what good was the lowering the price of fish at *London*? Did the *Spittlefields* manufacturers eat one pound the more? No, but the nobility, gentry, merchants, and tradesmen; and let me add the country-gentlemen; who come to town to spend their rents, in the vain frippery of the capital, purchased it the cheaper: such was the purpose for which money was raised

* *Inquiry into the causes of the high prices of provisions*, 8vo. 1767, p. 188.

in *Cumberland, Northumberland, and Cornwall*; or, in a word, three or four hundred miles from *London*. Country farmers payed their shares of grants, to enable their landlords to eat fish cheap at the capital; but at an expence of possibly 500 *per cent.* more than they could have it for, in many instances, on their own estates. And the Society for the *Encouragement of Arts and Manufactures* acted upon the same plan.—This is very much in the stile of clamouring, for lower prices of *roasting pigs* and *poultry*, for the good of *poor manufacturers*.

II. The Exportation of Corn.

I shall not repeat here, what I have advanced in another place; and therefore, can only remark, that the Exportation of corn has been so far from occasioning a dearness of bread, that it has regularly sunk the price of wheat: and this being, of all other articles of provision, the most important, the service it has done the nation therein is the more to be observed. But several late crops deficient, by a quarter, or a quarter and half, *per acre*, having occasioned a dearness of corn; it is all attributed to the exportation, which does not
amount

amount to a bushel. The absurdity of attributing the dearness of provisions to this cause, is too great to require a more minute answer: I therefore refer the reader to my second letter.

III. Engrossing, &c. &c.

Every thing we have heard about engrossing, forestalling, and regrating, in the stile of attributing the dearness of provisions to them; is a collection of mere vulgar errors, and low prejudices. The laws against buying live cattle, coming to fairs, and then selling them at the fairs, is not only well conceived, but very well executed; and I scarcely know another instance, in which these crimes would be of bad consequence to us, in the degree to which there is any probability of their arising. As to engrossing of corn, it is mere idle talk: the thing is impossible to be done in any degree, that can raise or fall the price one farthing a quarter: if any public consequences attend it, it must be the lowering of prices, and not the raising of them; for corn would be engrossed while cheap, to sell again when dear; and of course the engrossers (I speak according to the ideas of the people I am answering)

ing) would save so much corn from being exported, and have it ready when the people wanted it most; so that much engrossing should *lower* prices in dear times, but all this is arrant stuff; for great farmers are the only people, who are, what are called engrossers; and so much the better for the *regularity* of prices. Let farmers keep their corn as long as they please; depend on it they will keep it no longer than to their profit, and their benefit is that of the public: if they could lay by their crops for seven years, the case would be different; but all engrossing to such, or any great degree, is impossible.

Those who clamour so much against engrossers, would be very glad, I suppose, to see private granaries now opening, with a million of quarters of wheat in them*.

Sel-

* The magazines which individuals form in good years, are a ready supply in bad ones: when the price of the corn is not very low, the proprietors of it had rather sell at home than elsewhere, because they escape thereby the expences and risques of exportation. Thus, without being, in almost perpetual want of public magazines, which are an immense expence to the government; and which in certain States are often subject to great inconveniencies, the people are otherwise relieved in cases of unexpected want. But this benefit is lost, if the exterior commerce of corn, and the magazines of
in-

Selling by samples, has been made a part of these crimes, and much clamoured against: one maxim; *viz.* That the *price* of a commodity should be in proportion to the *quantity* offered to sale*; has been found sufficient to form all the complaints against sample-selling; and the clamours for a law, to oblige all farmers to bring their whole crop to market. I never knew any of these sanguine writers complain of the exportation of corn in *very cheap years*, as much as they are against it in *dear* ones, and the bounty in any; they allow that exportation

dividuals are constrained too much. Far from rendering labour by such means cheaper, and facilitating the subsistence of the poor; the effect produced will be totally contrary. For the low price to which corn then falls disgusts the farmer, whose culture diminishes by little and little. A part of the corn-land is converted to other uses, or abandoned; and the husbandman thinks no more of the profit of fallowing his fields. Cultivating corn-lands for the consumption of the inhabitants alone; and none daring to form magazines, is a conduct which will presently be felt in the consequences; for the first bad year all will be in extreme want, and forced to have recourse to foreigners for bread, to support their lives. *Mémoires de la Société de Berne*, 1765. 2d partie, p. 394. *Mem. sur l'Esprit de Legislation* par M. Benj. Carrard.

* *Laws and Policy of England*, p. 19.

Inquiry into the Causes of the Present high Price of Provisions, p. 97.

is *sometimes* a benefit : but how should corn be exported, if all was brought to market to be sold ; such a law, if executed, would raise the price of our corn to foreigners 30 or 40 *per cent.* nay, it would in some instances, totally obstruct *all* exportation : the quantity of corn brought to market ; and the difficulty of lodging it from market-day to market-day, would both be so great ; the expences upon taking proper care of it so considerable ; that most farmers would sink their price, rather than submit to such evils ; and then comes engrossing, in ten times a greater degree, than is possible at present. Millers and jobbers, by very slight combinations, would command the market, and occasion mischiefs, at present, unthought of. But the consumption of the neighbourhood, and the sale to foreigners, would not be hurt alone ; if one part of the kingdom wanted corn of another, how would they get it ? why, with the same addition of price as the foreign markets ; caused by a prodigious increase of land-carriage, and market expences thrown upon the farmer. This matter deserves yet a little further explanation.

The

The farmer loads his waggon *at present*, and drives directly to the water side; either of the sea or a river. Were this law in execution, he would drive to the market, unload, and expose his sacks to sale; a merchant comes (we will suppose it to be in the East of *England*) to purchase for an order from the West of the kingdom, or from abroad: who is to carry the corn from the market to the port or river? Not the factor or merchant, for he has neither teams nor horses; if carriers are regularly kept for this purpose, the expence will be capital indeed: we must therefore suppose it to be the farmer; this is the only train in which the business could be carried on: here then we find at once, that a waggon, a team of cattle, and a man are to be kept in town, after the corn is brought, in expectation of its been sold, that they may drive off directly; but if it is not sold, they wait for nothing; go home at night, and another day when the corn *is* sold, have the same journey to take again to load the corn; and carry it, possibly, to a river ten miles nearer than the town to the barn door, at which it was first loaded. Let any one calculate how much *per cent.* all this,

this, with the expences and loss of keeping it in town amount to. Yet could I name twenty writers, who have pleaded with all power against selling by sample.

It is needless to proceed through all the causes mentioned by sundry writers, for the present high prices: these are the three capital ones, which are *most* exclaimed against; I might add with the *least* reason: having thus examined the *causes* advanced, and found them trifling and mistaken: let us next inquire into the *effect*.

As I began with shewing the indefinite manner, in which the dearness of provisions is in general expressed; I shall here aim, at least, at avoiding the same error, and endeavour to ascertain, what ought to be called *dear*, and what *cheap* times.

It is first necessary to explain, what is meant by the word *family*; that it may be known, how many people are, on a medium, to be given to every man.

I shall suppose all men married, which is more than I need to do, since numbers are single. It is calculated, that marriages in *Great Britain*, yield, on a medium, four children that live; but families do not always consist of so many; as they leave
their

their father's house generally on being full grown; and the wives, many of them die before their husbands; we must not, therefore, suppose every family to consist of six people: I do not apprehend it consists, on a medium, of above four; but as I would in this instance be over the truth, rather than under, I shall suppose it five*: himself, his wife, and three children.

These three must be taken, on a medium, as to age and strength. For a few years after the man marries, his children earn nothing, but in a few more the case alters. I apprehend the average of families to be near as follows:

One child, an infant.—This proportion is by far too great; but I had rather, as I said before, yield much than take a little.

One of ten years old:

One of fifteen years old.

Small variations will make no difference in my calculation. Now let us state the expences of such a family. And in the first place *food*.

* Calculators allow but six to each *house*; a family, therefore, can scarcely be more than four,

Seven-days Messes for a stout Man.

			s.	d.
<i>First.</i> Bread, 2 lb.	-	-	0	2

N. B. Wheaten-bread, $1\frac{1}{2}$ d. and
 2 d. per lb. ryed 1 d. and po-
 tatoe-bread, excellent good, $\frac{3}{4}$.
 The potatoes at* 2 s. a bushel.
 A mixture of these three, in
 equal parts, I call 1 d. per lb.
 No bread exceeds it.

Cheese, 2 oz. at 4 d. per lb.	0	0	$\frac{1}{2}$
Beer, two quarts †,	-	0	1
<i>Second.</i> Three messes of soup †,	-	0	2
<i>Third.</i> Rice-pudding,			
Half a lb. of rice, 1 d. two			
quarts of flet milk, 1 d.			
Sugar, $\frac{1}{2}$ d.	-	-	0 2 $\frac{1}{2}$

Fourth.

* They weigh 58 lb. the peelings I call 10 lb. they
 are then a $\frac{1}{2}$ d. per lb. But the inhabitants of cottages,
 who have a little garden, may grow 10 lb. for a far-
 thing.

				l.	s.	d.
† Four bushels Malt,	-	-	-	0	17	6
Hops,	-	-	-	0	1	6
Yeast,	-	-	-	0	0	6
				0	19	6

This will make of good beer, better than any small
 drink in farmers houses. Two hogsheads amounts to
 not quite a halfpenny a quart.

† Mr. *Hanway's* receipt. Letters on the Improvement
 of the Rising Generation, V. 2. p. 194. It is for five
 O stout

	<i>s.</i>	<i>d.</i>
<i>Fourth.</i> Quarter of a lb. of fat meat, and $1\frac{3}{4}$ of potatoes baked together *, $1\frac{1}{3}$ d.		
Beer, 1 d.	0	$2\frac{3}{4}$
<i>Fifth.</i> Rice-milk †, - - -	0	2
<i>Sixth.</i> Bread, cheefe, and beer as the first, - - -	0	$3\frac{7}{8}$
<i>Seventh.</i> Potatoes and fat meat, $2\frac{1}{2}$ lb. 2 oz. of cheefe and beer, - - -	0	4
Call the average 3 d. a day, -	1	$8\frac{1}{4}$

From a variety of minute inquiries, I find that the wives of the labouring poor

stout men—9 pints water—1 lb. beef lean, cut into thin slices, $3\frac{1}{2}$ d.—1 pint split pease (boiling field-pease I suppose as good) $\frac{3}{4}$ d.—12 ounces of mealy potatoes, $\frac{1}{2}$ d.—3 oz. ground rice, $\frac{1}{2}$ d.—After these have boiled gently two hours, add three large leeks or onions $\frac{1}{2}$ d. two heads of fallary—and salt; instead of the fallary, I add two more onions, which, and salt, say 1 d. This is $6\frac{3}{4}$ d. The fifth is $1\frac{1}{4}$ d. but as I think the quantity small, I allow two penny-worth of it.

* Salt included, it will not amount to more; and an excellent dish it is.

† I have marked 2 d. but exceeding nourishing and good rice-milk may be made in quantity enough for the stoutest man a day, for $1\frac{1}{2}$ d.

eat, upon an average, more than half;
but not so much as two thirds of what
their husbands do : I shall say, two thirds.
The medium of boys and girls of fifteen,
three fourths ; this is above the truth, but
I shall let it pass. Ditto, 10 years old,
half. And an infant costs, upon an ave-
rage, 1 s. a week :

			s.	d.
The man's food,	-	-	1	8 $\frac{1}{4}$
His wife's,	-	-	1	1 $\frac{1}{2}$
Child of 15 years old,	-	-	1	3 $\frac{3}{8}$
Ditto, of 10,	-	-	0	10 $\frac{1}{8}$
Infant,	-	-	1	0
				5 11

l. s. d.
Six shillings a week amounts
in the year to, - - 15 12 0
To this sum we must add others,
which cannot be divided in-
to weekly or daily parts.

House-rent,	-	-	-	1	10	0
Carry over,				17	2	0

O 2

Brought

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over,	17	2	0
Cloaths †,	-	2	10
Soap and candles †,	-	1	5
Loss of time and physick during illness,	-	1	0
	£.	21	17
		0	

In the next place we must inquire into the ability of such a workman's supporting this expence.

Labourers and manufacturers, earn upon a medium, about 1 *s.* 3 *d.* a day, which is *per ann.* - - - 19 10 0

The wife earns, on a medium, better, I believe, than a fourth of the husbandman's pay: I shall call it a fourth, 4 17 6

The medium of boys and girls, of 15 years old, earn the half of their fathers, which is 9 *l.* 15 *s.* but I shall say only, - - - 9 0 0

Ditto of 10 years old, a fourth, 4 7 6

£. 37 15 0

† These articles I state as the medium of several families, I have inquired into, during the present high prices of candles, soap, and leather.

Year's

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Year's earnings,	37	15	0
Ditto, expences, - -	21	17	0
Receipt exceeds the expence by	15	18	0

I have deducted nothing upon account of fuel; because I have found it, of all others, the most varying article; rising from 10*s.* to 3*l.* but if 1*l.* 15*s.* or 2*l.* be charged for it, I am certain (from the best of my information) that the average of cheap and dear countries will not exceed it.

Some of my readers, will, I suppose, cry out, "This calculation is all romance! Shew me a family that lives so cheap!" But is their not living so cheap any fault in the price of provisions? Let me ask in return, where the poor family is to be found, that do not drink tea once a day *at least*? Can they live so cheap, as if they desisted from their tea-sipping? Or are they to complain of prices, when they will not allow them to trifle at the tea-table? Is there any necessity that they should eat nothing but the best wheaten-

bread, when other kinds are to be had much cheaper, but equally wholesome? Whenever therefore the price of provisions is complained of, let an explanatory expression come in, "as we chuse to live."—Fuel deducted here, is 13 *l.* 18 *s.* 0 *d.* overplus in the pocket of an industrious *frugal* workman at the year's end, after deducting 1 *l.* for the chance of sickness; and those who know the health which labour confers, will easily believe that 1 *l.* to accumulate in case of accidents. This overplus of 13 *l.* 18 *s.* is so considerable, that it admits of great deduction, *according to the fancy* of the reader; and yet there will remain no trifling sum to lay up against old age.

I am so strongly sensible of the prejudices, I have here to combat with, that I shall now lay before the reader a state of the expences of a labourer, as they now live, drawn up from the actual out-goings of *four*, who gave me the particulars; I am very certain *not under* the truth. The following state is in every article the medium of the four. I sought out four, whose families in point of age, &c. were such as I have specified above.

Bread,

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Bread <i>per</i> day, 6 <i>lb.</i> 9 <i>oz.</i> at			
1½ <i>d.</i> <i>per lb.</i> is 9¾ <i>d.</i>	-	0	5 8¼
Cheese, 13 <i>oz.</i> at 4 <i>d.</i> -	-	0	1 9
		0	7 5¼

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Call this 7 <i>s.</i> 6 <i>d.</i> it is <i>per ann.</i>	19	10	0
Beer, 1 <i>s.</i> 6 <i>d.</i> <i>per</i> week,	-	3	18 0
Soap and candles,	-	-	1 5 0
Rent,	-	-	1 10 0
Cloaths,	-	-	2 10 0
Fuel,	-	-	2 0 0
Illness, &c.	-	-	1 0 0
Infant,	-	-	2 12 0
	£. 34	5	0

This sum deducted from their earnings, which I found upon an average, as before stated, *viz.* 37 *l.* 15 *s.* there remains 3 *l.* 10 *s.*

The first question that can rationally be started, even upon this account, is, how can the poor be *so poor*? The answer is ready in a moment, and I fear too universally applied: These earnings can afford

ford neither drinking tea at home, nor tippling ale abroad. The overplus of 3 *l.* 10 *s.* upon the mention of these articles, vanishes at once.

I should remark, that this state supposes the man to eat every day, 2 *lb.* 4 *oz.* of bread, besides cheese, which is so much more than appears to be the mean quantity eaten, in the table of bread-eaters, in the judicious *Traacts on the Corn Trade*, p. 192, 193, and so much beyond Mr. *Hanway's* ideas, who uses the expression of — “ *granting*, that a stout working man may eat 1 $\frac{1}{2}$ *lb.* of bread in a day, yet, &c. *” that I am induced to believe there is some exaggeration in the matter.

But supposing the contrary, still we find the labourers pay sufficient for their expence, sufficient in these dear times, to support themselves, their wives, and their families, and provide for all extraordinaries; besides laying by no inconsiderable sum: and I am sure I know no difference, in point of health, vigour, and strength, between them and their families now, and years ago, when provisions were much cheaper.

* *Letters on the Imp. of the Rif. Gen.* V. 2. p. 99.

But

But there is one circumstance which I should apprehend, to be clear and decisive: The labouring poor, in general, earn *now* sufficient to live decently cloathed, and in good health; some, I know, are not able, but such their parish assists: I am speaking of those, who support themselves without assistance. Some years ago, they could buy bread and beer, and cheese, &c. &c. much cheaper than they can *at present*, while their earnings were the same. What was the effect of such cheapness? If the present *deariness* is so afflicting, sure the former good times were attended with no trifling effects? Instead of laying up three or four pounds; they then doubtless, saved twice as much! No such matter; whatever was gained by such cheapness, was constantly expended by the husband in a proportionable quantity of idleness and ale, and by the wife in that of tea: as to health, strength, cloaths, and money in pocket; I well know there was no difference in those cheap times, from the present dear ones.

I therefore think the reader will allow me to conclude, that the present prices of the necessaries of life are only *dear* on comparison

parison with those of *some* preceding years; but not intrinsically so; since a commonly industrious man may considerably more than maintain himself, his wife, and family. There cannot be a greater contradiction to truth, than asserting that every thing is dear; while a man with a wife and three children, may lay by 13 *l.* a year, after feeding, cloathing, and providing *for all*. It may be said, that wheaten-bread, that beef, that mutton, that tea, that sugar, that butter are dear; but do not in the height of an argument, jumble these and *the necessaries of life* together.

As I have in the preceding papers mentioned some unusual articles of food for the poor; a few words are necessary to explain that matter more fully. In respect of potatoes, they are of all other things the cheapest, and most inexhaustable resource. I know not one single cottage without a *piece* of ground belonging to it; I was going to say a garden; but they are frequently kept in too slovenly a manner to deserve that name. All the poor that live in the country, might raise a plenty of this nourishing root, at an expence too trifling to mention: And that it will make
ex-

excellent bread when mixed with wheat-flower, or with wheat and rye; I very well know, having eat it more than once*. Rice is known by all to be the most nourishing of grain, and sold so cheap in all the shops of *England*, as 2 *d.* a pound. Four penny-worth of bread are easily eat in a day by one man; but boil a pound of rice, in a penny-worth of milk, and you will not so soon find a man that can eat it. Three parts out of four, of mankind, I conjecture, eat little else†. But without
recur-

* See a proof of potatoes making good bread. *Berne Mem.* 1763. *partie* 1. p. 37.

† It will not be amiss to insert here a passage from the excellent Mr. *Hanway's* Letters, as it is very much to the present purpose.—“*Portugal* does not grow above half wheat enough, for the consumption of her own people in a plentiful year, and on a medium, not for above five months; yet a *Portuguese* is supplied with bread, and his garlick, and onions, and fruits; his various preparations of rice, which he eats at about two pence a pound from *Carolina*, and his dried fish at three-halfpence, from *Newfoundland*, content him. If in the family of a *Fidalgo*, or nobleman, there are ten pounds of meat provided for forty persons, it is the most they usually consume on flesh-days, though it amounts to but 4 *oz.* each; the rest, they make up with bread, rice, and vegetables, and the water they boil them in.—If a *French* man has bread and vegetables, and soups made even without flesh, he does not murmur.—A *Russian* having a large flat loaf, of
black

recurring to these articles, common provisions are, upon the whole, at no very unreasonable price. No man can be a better judge of these matters, than that admirable writer, Mr. *Harte* ; speaking of the price of provisions in *England*, he says, “ Corn is much cheaper, than it was in half the last century, or during the whole of the preceding one : And great plenty of Corn, helps to lessen the price of butcher’s meat. Rye and barley-bread, at present, are looked upon with a sort of horror, even by poor cottagers, and with some excuse ; for wheat now is as cheap as rye and barley were in former times ; and therefore the yeomen of this kingdom, about one hundred and thirty years ago, mixed both these vegetables with wheat to make bread : but the very name of this mixture is now for-

black *rye-bread*, though kept for weeks and months, being dipt in water ; he eats it with salt, and never complains.—If he finds fish, with which these great rivers of *Russia* abound, he makes a soup, eats it with delight, and is thankful.—I have seen great misery in *Persia*, but not from the want of bread. Whilst they have rice, provided it be relished with burnt-butter, a *Persian* is contented. *Letters on Imp. of Rif. Gen.* V. 2. p. 260.

gotten ;

gotten* ; whilst the pure flour of wheat, made into bread, was hardly tasted but at court, and in the houses of the nobility and prime gentry, where it bore the name of *cheat*.—If we take quantity and quality both, few travellers will find a country where bread and butchers-meat, upon the whole, are cheaper, and better than they are in *England*†.

Prices are to be judged by many circumstances ; for instance, the foreign, as well as the home consumption of manufactures ; the consequence to the state, as well as to individuals ; and many points will be found, in which *high* prices are as advantageous as *low* ones can be‡. It is difficult
to

* “ It was called *maslin* bread, quasi *miscellane*.”

† *Essays on Husbandry*. p. 176, 177.

‡ High prices at home are no discouragement to the industrious, most certainly, however disagreeable they may prove to consumers ; and while they stand high, it is a proof that the demand of the consumers does not diminish.—High prices upon goods to be exported, are to be judged of by the proportion they bear to those in other countries.—Now the price of a manufacturer’s wages is not regulated by the price of his subsistence ; but by the price at which his manufacture sells in the market. Could a weaver, for example, live upon the air, he would still sell his day’s work according

to say *precisely* what are high prices; but some thing will be gained if we define what *are not* high ones, and I will venture to assert, that the prices of necessaries are not too high in a *manufacturing trading* state, when the labouring poor can by industry earn a sufficiency of wages, to provide themselves with the necessaries of life; *viz.* a warm cottage,—tight and decent cloathing,—food of some kind that is wholesome,—soap, candles, and firing.

According to the value of the manufacture produced by it, when brought to market. As long as he can prevent the effects of the competition of his neighbours, he will carry the price of his work as high as is consistent with the profits of the merchant, who buys it from him, in order to bring it to market; and this he will continue to do, until the rate of the market is brought down.—When in any country the work of manufacturers, who live luxuriously, and who can afford to be idle some days of the week, and still live upon their wages, finds a ready market; this circumstance alone, proves, beyond all dispute, that subsistence in that country is not too dear, at least in proportion to the market prices at home; and if taxes, on consumption, have in fact raised the price of necessaries beyond the former standard, the rise cannot in fact discourage industry: it may discourage idleness; and idleness will not be totally rooted out, until people be forced in one way or other, to give up both superfluity and days of recreation. “Inquiry into the Principles of Political Oeconomy, V. 2 p. 504. It is observable a *natural* or *artificial* rise, is in effect the same thing.

And

And besides these several articles, something annually to lay by against sickness and old age, that the parish may not be their only dependance.

Short definitions of terms and propositions, are open to an infinity of exceptions and errors: This diffuse one may not be free from them; but the candid reader will collect the *general* meaning of the passage, and not dwell upon that of particular words.

I apprehend no one can expect any sort of provisions to be so cheap, that all the poor should be able to maintain themselves: that would be impossible. Old people, who are past hard labour, cannot earn to the amount of any prices; and as young hearty single men earn infinitely *more* than necessary to maintain them; the medium is, what alone we should calculate by. Whenever therefore, the terms *labouring poor* are used, we should always understand the average of families; as I have specified in the preceding pages, And I cannot conclude this letter, without expressing the satisfaction I feel, at finding that the prices of the *necessaries of life* are by no means so high, that the industrious
 peo-

people cannot only live, but live well; and I have great reason to assert, that I experimentally know, our poor in no part of *England*, would have cause to complain of high prices of provisions, were they to be persuaded to use less expensive, though not less wholesome and nutritious food; and the same time totally to desist from that pernicious practice, the *drinking of tea*.

It is here necessary to remark, that the way to have a country become extremely populous, is to have it possess a constant supply of all sorts of necessities of life, so cheap that every one may command a plenty, without industry or hard labour; for then marriages will greatly increase, and at a younger age than is common at present in trading countries. I would by no means have the reader imagine, that I think the prices of provisions at present are favourable to population; but a distinction is always to be made between the interests of population, considered merely in itself, and those of the agriculture, trade and manufactures of the kingdom; if provisions were so cheap, that one day's moderate labour would maintain a family a week, we may depend upon it, but one day's

day's work, would in general be performed : What would then become of agriculture and manufactures? — Population would, however, thrive abundantly,—none would be afraid of the expence of a family—all would marry. Let not the reader start at the proposition of agriculture being ruined, and yet the people being fed cheap—I am only forming a supposition. We may suppose rice to become the common food, and sold here at two pounds for a farthing; any thing of this kind will do to explain the nature of the cause.

If provision was so cheap, the farmer and tradesman (were agriculture and manufactures, &c. to flourish as at present) would find six-times the people necessary for their work, as they would have every week instead of *one* holy-day, *six*: All this might do very well, for population, as I said before, but for nothing else.

Suppose, however, that provisions, &c. were to drop, and regularly remain at one-sixth of their present price, without rise or fall; and suppose that day-labour of every sort and kind were by some dextrously executed laws to sink likewise to

P

a sixth

a sixth of the present rates: how then would agriculture and manufactures thrive? Why, if such a situation could last, we should run away with the trade of the whole world: But population would be precisely as at present; for the proportion between *provisions* and *pay*, being the same, a family would be as difficult to maintain, and the necessity of working hard equally the same as now—the state of the poor therefore would not be changed. Let me, however, remark, that such a situation could scarcely last; for that general ballance, which ever forms, of itself, among the nations of any quarter of the globe, being so totally broken, would occasion such a variation among neighbours, that it would presently be destroyed, and the former *level* take place. Those who consider the proportion between *demand* and *price*, between *expences* and *living*, with various other combinations, will not find it difficult to comprehend this.

LETTER VI.

THERE are some other very important inquiries to be made into the state of agriculture, and many remarks to be made on it, which are of more consequence to the well-being of this kingdom, than are apparent on a superficial view. But as the excellent *Society for the Encouragement of Arts, Manufactures, and Commerce*, have, in a liberal manner, offered premiums for promoting many valuable inquiries; I shall follow their order of treating of them, and make such remarks as my *experience* of the subject will allow me. Those for 1766, are as follow:

Lucerne.

The culture of this celebrated plant was very minutely attended to by the old *Romans*; but their *sarritions*, *runcations*, and *rigations*, however they might answer in those times, it is very clear will not at present; and if they would at present in *Italy*, most certainly will not in *England*.

That lucerne is an object worthy of the *English* farmer's attention must be apparent, if we consider the vast quantity of herbage a good crop yields, the nutritious quality of it, *as it is said*, of fattening cattle, and the benefit it is of to the land. The methods of cultivation mentioned by the Society are *planting* and *sowing*. The planting is in reference to the newly discovered method of cutting the tap-roots and transplanting: the sowing is either in the broad-cast mode, or by drilling. As a sufficient number of experiments have not been published to prove which of these methods is most advantageous, the Society very judiciously leaves it to the cultivator's private judgment.

The only experiments of any authority which we have on lucerne are, *first*, Those published in that admirable book the *Essays on Husbandry*: these are in the transplanting method; and as to all the points of culture, expence, duration, &c. are highly satisfactory. *Secondly*, Mr. Rocque's, in the broad-cast method; but these, from many circumstances, are not of satisfactory authority; for they are not registered *as* experiments, but delivered to the reader in
the

the stile of didactical instruction; the expences are not inserted, nor is the duration by any means proved. *Thirdly*, Mr. *Miller's*, in his dictionary, but these are likewise meer instructions—not experiments, and the gentleman's that gained the medal (*Museum Rust.* Vol. vi. p. 170.) no name nor place of abode; in the drilling method: but as it is only one experiment, and the expences not stated, this will by no means satisfy even the least inquisitive inquirer.

As to all the tribe of experimenters, who are *nameless*, or who give us nothing but *directions*, not the least credit is to be given to them. Mr. *Wynn Baker's* trials are yet too inconsiderable to establish any conclusions.

The penetrating author of the *Essays on Husbandry* (the Rev. Mr. *Harte*, Canon of *Windsor*) is by far the most satisfactory; and indeed the only authority, in any method, that a cautious cultivator can be satisfied with. His experiments teach us, contrary to the mistaken ideas of *Tull**,

* “ I have often tried the transplanting of plants of Sainfoin and Lucerne, and could never find that any ever came near to the perfection that those will do which are not removed, being equally single. *Horſe Hoeing Husbandry*, 3d. edit. 1751. p. 49.

that transplanted lucerne is an object of infinite importance, and exceeds in profit most of the commonly cultivated vegetables. That most accurate cultivator tells us, page 118, 119, that a plantation of his own yielded, at the rate *per* acre of feeding two coach-horses near five months, and fattening a small heifer besides. And page 122, he calculates the *clear* profit of transplanted lucerne, at 5 *l.* an acre. And as it answers, not only in point of private advantage, but also in public benefit, in respect of employing a great number of hands; the culture ought to be highly encouraged, and a variety of experiments to be promoted.

The drilling method likewise promises great advantages; but for want of satisfactory experiments, no absolute certainty is to be gained. The broad-cast method *may be* of benefit on *some* soils; but that it will answer at a distance from *London*, in the mere quantity of cattle it maintains, is a problem yet; I question much, whether (in this method) it equals clover. The land most undoubtedly is not improved by it like the transplantation and drilling.—Such being the extent of the public knowledge

ledge in this important point, it clearly proves the great utility of the Society's *design* in their premiums for promoting experiments in it. But the offer is only twenty pounds for the greatest quantity not less than *ten* acres. Gentlemen, I should apprehend, would *rather* aim at an honorary premium; I suppose, therefore, this is meant chiefly for the farmers: now a *farmer* will never be tempted to try an experiment of a very doubtful event, the expences of which will not be repaid by the premium, *if he gains it*. But when he considers the actual expence; the loss of a clover crop, if the lucerne fails, the probability of likewise losing a one earh wheat-crop, and the chance that he may not gain the premium; when he considers these circumstances, I must own I doubt much whether one farmer out of twenty thousand will venture the attempt. A certain premium for every acre is the only thing which, I apprehend, will ever spread the culture.

Carrots.

Carrots and parsnips have been cultivated some years with great success, as a

food for cattle in the island of *Guernsey* *. I know of no other part of the kingdom where the culture of this root has for some time been common, except the neighbourhood of *Woodbridge* in *Suffolk*. The farmers there (particularly in the angle of country between *Woodbridge* creek and the sea-coast) regularly cultivate a small field of carrots, for the winter-food of their horses, and sometimes to send by sea to the *London* market. I took a journey into that country on purpose to observe their crops, and to take some minutes of the method of cultivating them.

The soil is an exceedingly light sandy loam: I know not whether I ought not to call it an absolute sand: so deep and loose that I easily, with a shovel, with scarce any force, made a hole a yard deep in a carrot-field belonging to Mr. *Moore* of *Wantesden*, without finding any change of soil. It was in *October*, and the crop taking up: many of the carrots were as large as the body of a quart bottle, and of a great length, and very straight: they had often twenty, or four and twenty cart-loads on an acre (each forty bushels:) they

* *Mem. Communicat.*

reckon them a very good fallow for barley. The method of cultivating them was to plough a very fleet furrow, with a pair of horses; then another plough, sometimes with four horses, followed, and cut as deep as they could, to the depth of eighteen or twenty inches, and then harrowed in the seed: all which operations they perform nearly about *Lady-day*, with no previous ploughing of the stubble. They hoe them three times, at the price of six, five, and four shillings an acre: always dig them up, which is performed with great ease and expedition.

In such a soil, and where the work is common, the hoeing is performed, we find, for fifteen shillings *per* acre: whereas in other parts of the kingdom workmen will not do the first hoeing under thirty shillings. I have, myself, cultivated them on a fine light turnip-land loam, trench ploughed and hoed the first time at that expence; and the men made only eighteen-pence a day *per* man, although I thought they would earn half a crown. Now this vast expence of hoeing, and the succeeding one of taking up the crop, renders their culture excessively expensive in any country where

where it is not a common practice. I cannot but therefore conclude, that a certain premium *per acre* will be the only method of extending the culture of this useful plant.

Mr. *Billing's* treatise contains the only experiments we have extant on carrots: very clear and satisfactory they are, and set forth, in a most convincing manner, the importance of the object. Turnips will prosper well on land which will not bear carrots; but whenever the soil will admit them, their culture is by far more profitable than that of the turnip.

Parsnips.

What has been said of carrots, is in a good measure applicable to this root. But I am very fully persuaded that, unless it will thrive on a soil too stiff for the carrot, the culture will never answer: the latter is by far the most valuable vegetable; but many people, who have heard of the parsnip-culture in *Brittany*, conclude too speedily in favour of it in *England*: however, too much cannot be said in return for the patriotic extension of the Society's views.

Parsley.

Parsley.

We have not one experiment of any authority on this plant : nothing therefore can be said of its value ; but the idea of its use for feeding sheep, very rationally induced the Society to give a premium for its culture ; and as the quantity which may gain the premium of twenty pounds is only four acres, there is more probability of its having some effect : but in every object, some certain offer for every acre is the way to advance the measure.

Burnet.

We read of Burnet mentioned as an excellent food for milch-cattle, so long ago as the year 1616 and 1620 ; but I have always been of opinion, that it was not *Rocque's Burnet*, but the *Burnet-Saxifrage* ; concerning which, much has been related in the last century*. It is remarkable, however, that a plant revived as food for cattle so lately, should so soon bid fair for getting the start of lucerne, which is, beyond doubt (properly cultivated) a more

* *Mem. Communicat.*

valuable pasture. Dr. *Lambe's*, Mr. *Lewis's*, and Mr. *Baldwin's* *, not to mention what Mr. *Rocque* has written on the subject, are very valuable experiments.

However, this latter plant is certainly worthy of the attention the Society gives it; and though all cattle will not relish it well, yet if it proves beneficial to cows and sheep only, the earliness and quantity of it render it an object truly valuable; and it is with great satisfaction I find the premiums offered by the Society *for the greatest quantity* have been attended with such vigorous claimants. Their premium for *burnet on the poorest soil*, is also of singular utility. There are many thousands of acres of a driving sand, which will bear no crop hitherto known; if burnet will thrive on such a soil, it is a valuable acquisition indeed!

I cannot dismiss this article without observing what a flagrant imposition on the public was Mr. *Rocque's* selling the seed for two shillings a pound; a seed which is

* Ploughed up this year; but the Lucerne Experiments of this very ingenious and accurate cultivator, are worthy of no inconsiderable attention.

produced at the rate of ten quarters *per* acre. However, I find it is already, in other hands, got down to four-pence.

Grass-seeds.

An untrodden field ! No experiment has been made on separated grass-seeds : it promises greatly in idea ; and accordingly became an object of the Society's attention. But if they have any where fallen short in proportioning their premiums to the difficulty of the work, it is here. The premium is *For the greatest quantities respectively of several sorts gathered clean by hand, separately sown in drills, and kept clean from all mixtures of other grasses and weeds ; Ten pounds.*

It should be considered that the business of *gathering* the seeds is very tedious and expensive ; the sowing them in drills is the same, as no drill-plough can shed them ; the drills must be struck by a line with a hoe, the seeds sown by hand, and covered with a rake. After all this, the keeping it clean will, together, amount to a prodigious expence. I do not think it could by any means be effected under fifteen or
twenty

twenty guineas an acre for the vernal and crested dogs-tail; and as to the rest, which are not to be had in near such quantities as those under a monstrous expence, it is impossible to say what it would cost, for the drills ought not to be more than a foot asunder. A premium, therefore, of ten pounds, and only for the *greatest* quantity, can be no additional inducement to any one who ever had such an undertaking in his thoughts.

The next premium is so worded as not (without explanation) to be understood. It is as follows: *For the greatest quantity of land (not less than one acre) which shall be sown with any one of the above-mentioned sorts of grass-seeds * unmixed, in the year 1767, the Society will give a premium of twenty pounds for each quantity of land so sown; the sowing to be in drills, for the convenience of keeping the grass from weeds.* Would not any one suppose that this was a premium of twenty pounds for every acre sown? Else what is the *English* of those words for *EACH* quantity of land so sown? At first indeed it is said, for the *greatest* quantity; but one would apprehend the meaning to be twen-

* Nine sorts.

ty pounds for every acre, and twenty for the greatest number of acres. A friend of mine was of this opinion ; but the doubtful wording of the passage induced him to write to the Society's secretary, Dr. *Templeman*, whose answer was, *he apprehended the Society meant only for the greatest quantity.*

This affair of sowing grass-seeds unmixed in drills, and keeping them perfectly clean, is certainly an object of national importance : and were a premium given for every acre of one kind (to a certain sum) twenty pounds, for instance ; to an hundred pounds, or five acres ; such five acres once cultivated, and the seeds advertised at a reasonable price, would presently extend to fifty, and soon to all the lands in the kingdom laid down with grass-seeds. By giving a premium in that manner every year for one sort, the whole would be compleatly cultivated in nine years time, at the expence of an hundred pounds a year ; and by properly arranging the sorts to the soils that were sown with them, the benefit would be immense and boundless to the nation. The extending this noble object of the Society's attention, would however at last depend entirely on reducing the expence of laying down fields

to grafs. The common hay-feeds at present necessary for an acre are twelve facks, which, at half a crown a fack, is thirty fhillings; fometimes the price is two fhillings, and then twenty-four will fow an acre. Now if the separated feeds cannot be afforded in a term of years under that price *per* acre, the farmers will never use them: if the expence of both sorts be equal, they will prefer the *old* method—but tell them the separated feeds will cost four or five fhillings an acre less, and they may poffibly liften to you.

Cultivation of Wheat, &c. in Drills.

The Society, with great judgment, gives an honorary premium, a gold medal, for the moft accurate account of experiments on the comparative culture of wheat, rye, oats, barley, lucerne, faintfoine, carrots, parfnips, parfley, turnips, beans, peas, and tares or vetches.

There is not a more dubious point in agriculture than the difference between the Old and New husbandry. We do not even know the merits of the old husbandry. How ftrange is it that all the thousand

stand books of agriculture with which we swarm, not one can answer this plain question, What is the profit of a crop of wheat? And I will allow it to be an answer, only to inform me what the profit is on any soil, and under any circumstances which might attend an experiment. I know perfectly well that such an answer is not complete; but even the result of one full experiment is no where to be met with: for as to common assertions, and giving the quantity produced, without every article of culture and expence, there is no dependance to be placed on such accounts.

There have been some sensible experiments on barley and turnips, &c. published in *Mills's* husbandry, as performed in *Yorkshire*.—They may be so: but by whom? and at what place? We have them on no better authority than another assertion of a gentleman that transplanted his turnip-crop, which ridiculous practice Mr. *Mills* speaks of in terms of recommendation. I call every practice ridiculous that does not pay the charges—and all recommendations of any, unless positive proof is

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produced of their quitting costs, are of a pernicious tendency: but I shall speak more of this practice by and by.

Mr. *Wynn Baker's* few experiments are very judicious and conclusive: but the reader should be extremely cautious of ever giving the same credit to calculations of a term of years drawn from an experiment of one or two, as to the immediate circumstances of the experiment itself.

Those of *M. de Chateaurvieux* I cannot speak of in the terms of praise which many use in commending them: since the expences of each method are nowhere inserted, nor satisfactory accounts of the old culture, which must be wretchedly deficient to produce only three times the seed.

As there is such a great scarcity of satisfactory knowledge of these articles, we cannot too much commend the laudable attention of the Society to this curious branch of culture. We may, from their endeavours, hope, in no long time, to see experiments of undoubted authority, published on all these articles, so that the comparative value of both methods of cul-

ture may be fully and determinately known*.

Madder.

The sum of five hundred pounds a year given in premiums of five pounds *per* acre for all madder planted, is one of the noblest, most effectual and speediest methods of extending the culture of that valuable plant, that could have been devised; and I will answer for it, has been attended

* It is an observation of the author of the *Essays on Husbandry*, that wheat may one day be cultivated to greater perfection. "Our fellow creatures may possibly arrive to higher perfection, one time or other, in the culture of wheat, notwithstanding it has been the constant employment of mankind ever since the world began: For, at present, a return of *seven* for *one*, makes the common produce at an average throughout all *England*: nor is any *European* nation, upon the whole, more successful than ours in this point. Yet the two *Ulloas* (*Spanish* authors of great credit) assure us that wheat in *Chili* often produces a crop of one hundred fold: So that probably the soil proves better than ours, or greater space is allowed the plants; but then the misfortune is, that the husbandman in *Chili* has no vent, except amongst his few neighbours, and no exportation for the grain thus raised; which of course reduces it to so low a price, that three *arrobas*, or one bushel and one gallon of wheat, *English* measure, are usually sold for two shillings, nine pence three farthings, and sometimes for two shillings and three pence." *Harte's Essays on Husbandry*, Essay 1. p. 91.

with a hundred times the benefit of five times the sum given for the *greatest quantity*. Five pounds is of some account towards the planting the first acre; and of great consequence towards all the succeeding ones. The same observation which I have made on the preceding articles, the want of experiments, is equally applicable to this: we are nearly in the dark. However it cannot long be the case, as the Society proceeds so vigorously in encouraging it. The premium for the *greatest quantity* on an acre is extremely well judged, as the others are offered for *every* acre.

Bees.

Hardly any subject in rural œconomics has been so thoroughly exhausted by *English* authors, as the *management of bees*. The author of the *Essays on Husbandry* has a catalogue of these books, that amount to near 70 volumes. The Kings of *England* till about the year 1680, always had a *Bee-master*, with an annual stipend of royal bounty. The great consequence these insects are of to a trading nation, induced the Society to offer five pounds (as far as two hundred) to every person
who

who collects ten pounds of wax from his bees, without destroying them. A most munificent premium! and cannot miss of the wished for effect. The plan is certainly no chimera; Mr. *White* having published a satisfactory account of the boxes and operation.

Machine for draining lands.

This is one of the most useful implements to husbandry that could be invented. The common price of cutting water-thoroughs with a spade, in my neighbourhood, is, through ridge-work, to open the furrows on one side, no plough having gone before, a penny a rod dug two inches below the furrows; and if it has been ploughed, a halfpenny. On broad lands, to open the furrows on each side, unploughed, a half-penny, and ploughed, a farthing. This expence on a field of twenty acres, has, to me, amounted on flat land to twenty shillings, and but ineffectually done too. I have been often forced to have them scoured again at a fresh expence. The vast savings, therefore, that would result from a machine

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which

which could be worked by four horses, are very great.

The machine, however, which the Society describes, is only for pasture-lands; for *they* require that the earth of the drain *be equally thrown out on both sides*: now this would by no means do for ploughed lands, as we always throw the moulds of such drains *one* way, that the furrows may be open on the side of the drain contrary to the natural fall of the land, to receive the water from off it. The plough the Society describes, would be of incomparable use to grass-lands, where *all* the moulds are carted away to the compost dunghil, or spread about the field: but I must wish greatly to see likewise a machine for draining ploughed lands; such an one needs not cut above four inches below the furrows. Mechanicks, in providing such implements as these, greatly benefit agriculture; but are frequently applied in a too whimsical manner, of which I know not a more striking instance, than M. Pioger's construction of ploughs. See his *Observations on an essential fault in ploughs. Mercure de France*. The scheme of working more shares than one with the same force, is impracti-

practicable; his shares, pullies, cylinders, and numerous wheels, form a system of friction that would kill any four *English* horses; and I do not apprehend the *French* ones are much stronger.

Machine for slicing Turnips.

An object, however trifling in appearance, worthy of the Society's notice, and they have very judiciously offered their premium of twenty pounds for the best *cheap* one.

Turnip Cabbage.

The celebrated author of the *Essays on Husbandry*, brought the seeds of this plant from *Carniola*, in the year 1749, and was the first who applied it to husbandry uses. The ingenious Mr. *Baker* lately made some experiments on it, which prove it to be a most valuable acquisition to the farmer; for the dependance on a crop of turnips late in the spring is so very insecure, that some succedaneum was highly necessary. And, in respect of this plant, I cannot see why a farmer should not venture on planting a large quantity; for suppose he sum-

mer-fallows his land for barley, he may as well plough his soil into five-feet ridges—arched up as yard ones—they will, if properly raised in the middle, lie as dry in the winter as the others: and then there is only the expence of the seed and transplanting, which may be performed for half a crown an acre. This is an inducement for aiming at the largest quantity; a different case from many of the preceding articles.

Boorcole.

This is an article of culture not *very* promising, but the Society *endeavour* to promote it by a premium; I do not, however, apprehend this plant will ever prove more advantageous than the common method of sowing coleworts, or coleseed, as it is called, for the food of sheep: however, this is ventured on conjecture.

Having thus ventured a few remarks on the articles of *English* husbandry, which the Society have thought worthy of encouragement, I shall proceed to hazard a few conjectures on the probable advance
of

of agriculture, from some points of encouragement it has not yet met with.

It must undoubtedly be owned, that the Society's premiums are well directed ; and although they are not, in every instance, of that force one could wish, yet the effect they must be attended with, cannot but extend the culture of those vegetables they patronize, and cast a light on the methods of culture. But experience teaches us, that these noble encouragements, are insufficient fully to determine the real merit of any one vegetable, or any one method of culture. The report of Mr. *Baker* to the *Dublin-Society*, gives us a sketch of a most effectual manner of discovering the truth in matters of agriculture. The being at the expence of the experiments made to ascertain it.

Thus, for instance, suppose the Society, not satisfied with the *effect* of their premiums, on any particular articles, should make themselves acquainted with several practical intelligent farmers in different parts of the kingdom, whom they could depend upon as to accuracy ; they depute a person to view such an occupier's farm ; and after becoming acquainted with the
preced-

preceding culture of his fields, their crops, the soil, &c. &c. fix on one or two, as they might determine, to be cultivated for a term of years, under their directions, and at their expence, in case the tenant does not agree to take the crops for his charges ; or in any manner that would insure the farmer from losing by the experiment: many there are who would be contented with a certainty of their common mean-profit; and if any surplus arose, it would be at the Society's disposal to reward the cultivator with, in proportion to the exactness of his obedience to their directions.

By entering into such a train, the Society would soon meet with men of integrity and zeal, for the well-being of husbandry, who would promote their aims to the utmost of their power. Experiments would tend to the direct point of information, which they want to acquire—none would be languidly pursued for want of money to carry them on—they might be made on a large scale—and, in one word, they would be prosecuted with spirit, when the cultivator knew a certainty of being re-imburfed his expences.

It

It would be difficult for such farmers (in case some were not so strictly honest as they ought) to defraud their employers: the prices of all country work, in any part of the kingdom, may be known perfectly on the spot, in a few days time; and the Society might limit the expence on every article, according to their own ideas. But it is a needless caution to suppose, that doubtful people would be so employed; since there may certainly be found many farmers—gentlemen farmers—clergymen on their glebes, &c. &c. who would most readily undertake such commissions, if satisfied for the loss of their common crops. —The *Dublin-Society* seems to put great trust in Mr. *Baker*, and rely on him for a satisfactory account of the expending considerable sums in husbandry-experiments, the planning of which they appear to leave to himself in a good measure. But this conduct might not in general be so adviseable; a few experiments are to be minuted in an instant, which are highly important, but the expence too great for a probability of their being executed by private people,

I.

Dig an acre of land in three different places, on three different soils (very light—rich—and very heavy) three feet deep; plant them with madder—and keep them perfectly clean from weeds, and the soil in a loose crumbly state by every method known. In three years dig up the plants to the former depth, and with that care as to leave no roots.—This experiment could not be executed under fifty pounds an acre.

II.

On several different soils let the following trial be made. The heavy wet land is the most usual for wheat, I shall therefore speak particularly of that. Give a complete summer-fallow to twenty acres of land—divide the piece into two fields of ten acres each: spare no cost in having a *most perfect* fence round each. Let one field be for the common husbandry; viz.

1. Wheat.
2. Turnips, if the land will admit them; if not, a fallow.
3. Barley.

4. Clover. 5. Wheat again, and so forth as before; and if the clover should fail any year, sow beans broad-cast, to be hand-hoed three times. Manure for turnips, if sown; and if not, the clover the autumn after the barley is off. Let the other field be sown *every year* with wheat, by the drill-plough for horse-hoeing. Let a thrashing-floor be raised in the field, with two floors covered for two stacks; by which means no mistakes could ever be made, as in a barn filled from a variety of fields, which is likely enough in the common course of business. Let this experiment last three courses or twelve years.

III.

Give a complete fallow to a piece of land of fifteen acres: divide it into three fields of five each: let one be planted with lucerne from a nursery, according to Mr. *Harte's* directions. Let the next be drilled —and the other sown broad-cast by Mr. *Rocque's* instructions. Let three small pieces of land adjoining, of half an acre each, be paled in, and racks erected in them

them for the fattening of heifers, oxen, &c. and the produce of each five acres given precisely, after weighing (slight engines necessary for that purpose might easily be raised) to respective cattle in each of the three divisions. Let exact accounts be kept for ten years. Such an experiment would reduce the matter to a certainty on any one soil at a time.

IV.

Fallow a piece of thirty-five acres completely; divide it into fields well fenced in; throw each into courses of husbandry as follows:

No. 1. Cultivated according to Mr. *Randall's* directions in the *Semi-Virgilian* course of husbandry.

No. 2. The common husbandry, commonly managed.

No. 3. Ditto, completely cultivated according to directions of the Society.

No. 4. Ditto, a crop of wheat, and a fallow, without any intervening crop.

No. 5. Drilled every year with wheat.
No.

No. 6. Ditto, and manured according to directions.

No. 7. Transplanted lucerne.

This experiment should be continued twelve years.

V.

Let two farms, each of 100 acres; 60 of arable and 40 of grafs; both situated on the same roads, and on the same soils, be placed under the management of two respective bailiffs, each to conduct the business of his farm according to the common methods of the country, except one being cultivated *entirely* with oxen, (no horses suffered to be on it) and the other with horses, of each the same number. Let them be stocked accordingly, and each bailiff directed to keep a proper journal of all his business, particularly the work and expences of his team.—Such an experiment might not set the matter beyond all doubt, but it would certainly be productive of a more determinate knowledge of the point, than any man possesses at present.

VI.

VI.

Let two small farms, each of 20 acres of arable land, and 10 of grass, be managed in the same manner; one with a pair of horses, the other with a yoke of oxen.

VII.

Let two squares be cut out of an uncultivated heath or plain, each of 500 acres, and well inclosed; one in a single field, the other divided into ten. Let the first be kept for a sheep-walk entirely, but hay or turnips purchased for winter-food; and the other converted into an arable farm, always conducted in the following course: 100 acres of turnips, 100 of barley, and 300 of clover and ray-grass. An accurate journal of the business of each farm, will prove to what degree it is beneficial to break up sheep-walks.

VIII.

VIII.

Form an experimental farm, consisting of three parts :

- 1.—Ten acres of natural grass to be applied entirely to the fattening of cattle, bought in the spring and sold in autumn.
- 2.—Ten acres ; five of transplanted lucerne, and five constantly of turnips, drilled and horse-hoed. Lean cattle to be purchased at *Michaelmas*, to be kept on the turnips until the lucerne is ready, and then fattened on it.
- 3.—Ten acres cultivated in a course of crops, as in the common husbandry.

Keep an exact register for ten years, and compare the three accounts.

IX.

In an uncultivated, and exceedingly light driving sand, fit to make mortar
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with, inclose four adjoining fields, each of five acres, and plant the hedges thick with *Scotch* firs: Build a cottage in the center and a little barn, and fixing a labourer in it, direct the crops of the four fields to be as follows, 1. Carrots. 2. Buck-wheat. 3. Burnet, sown with the buck-wheat, 40 *lb.* *per* acre; continue it until the surface of the four fields is cloathed with a thick crop of burnet, and then stock them with milch-cattle.

X.

In various soils, build cottages, and throw to each a certain quantity of land; from one acre to five, to be kept perfectly cultivated by the spade and rake, in the following course of crops: 1. Potatoes. 2. Wheat. 3. Carrots. 4. Wheat. 5. Pease and beans. 6. Wheat. Keep an exact register, and give premiums to the cultivators of the best crops. Let them be consumed by the people on the spot, and minute exactly the number maintained and how long.

A few experiments of this kind would discover how far population could be carried

ried by, a *minute* cultivation of the earth.

Some of these experiments, it is true, could not be prosecuted effectually, without a considerable expence; but a multitude of noblemen and gentry, in this kingdom, possess large tracts of uncultivated land, which offer perpetual opportunities of forming such experimental farms at a *moderate* expence, and waste land could never be applied to such uses without considerable returns; probably with no inconsiderable *profit*. And those who have public spirit enough, to execute any thing of the like nature of these experiments, will earn that fame their conduct so greatly entitles them to. I could sketch out a multitude of other experiments; but my ideas are sufficiently explained by these.—Any others might be executed on whatever objects the Society thought proper to recommend. I am well persuaded, that in a dozen years a complete knowledge might be gained in any point in husbandry at present unknown, and that in a much more certain and satisfactory manner than any *private* experiments can ever justify, unless un-

dertaken and executed by a gentleman of large fortune, and liberal disposition; for making experiments in agriculture, on a large scale, and managed in a complete manner, is a business of a great expence, and endless attention.

But there is one general circumstance relative to all experiments, without which they are of little value; and that is, Their Publication. This is universally the case with *all* experiments, but particularly so with the experimental transactions of a Society. Premiums undoubtedly are of great benefit, when properly bestowed; but I may venture to say they are not attended with a tenth part of their good effects, unless the results of them are published. They are, in general, bestowed by the *Society of Arts*, for the best experiments on certain vegetables; consequently whoever gain them, are supposed to be the authors of *satisfactory* accounts of important experiments; such should be *regularly* published, that all the world may see to what the Society gives its sanction, and be able to follow examples which have been found successful.

About a twelvemonth ago (but I speak from memory) I saw in the news-papers a list of medals conferred on sundry gentlemen, for experiments in agriculture: I wished to see the particulars, that they might be a guide to myself and friends, and made inquiries after them, but found all the publication they had undergone was a slight mention in the papers of the day.

It is certain that a great variety of experiments have been laid before the Society, as well as numerous machines of all kinds: it is strangely unhappy, indeed, if none of these are worthy of the public notice! However, while **THE TRANSACTIONS OF THE SOCIETY** remain unpublished, I am sorry to say, there results but little *general* benefit from their efforts in favour of *agriculture*. Five hundred pounds a year for madder, (as an instance) is a truly munificent premium; but I will venture to assert that several authentic relations of the soil, culture, expences, and profit of sundry acres of that vegetable, would, if published with the addition of the persons names and places of abode, perform greater things than twice five hundred pounds, —*provided the culture be profitable.*

I venture these remarks, the rather because a great genius in rural oeconomics, of the present age, speaking of the Society of *Tuscany*, says, “ *that it has its merit, provided the transactions of it were published periodically**.

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Before I finish this letter, I must make a few observations on the endless number of volumes, which have been, and are perpetually publishing on agriculture. The publication of experiments really made, faithfully related, and sufficiently authenticated, by the addition of the person's name and place of abode, is of great and important consequence to the publick good. But on the contrary, the very reverse is the case of these books, which are published under the title of *General Treatises—Systems, Dictionaries, &c. &c. &c.* comprehending more soils, articles of culture, &c. than any one man can experimentally have a knowledge of; consisting of the most heterogeneous parts, purloined out of former

* *Harte's Essays on Husbandry.* Essay i. p. 158.

books on the same subjects, without a common knowledge to discover the good from the bad*.

To cast a superficial eye over Mr. *Mills's* System of Husbandry, What a multitude of practices are recommended, of which the compiler is totally ignorant! They may, or may not, be advantageous, for what he experimentally knows—but all

* La multiplicité des écoles, l'ambition d'être admis dans ces académies, ou d'y être couronné, font naître une infinité d'écrivains qui sont enlevés à l'agriculture, aux arts utiles & au commerce; car en France un auteur ne fait qu'écrire, & s'interdit absolument toute profession utile. Les Auteurs sont une espece de Nobles, ou de gens vivant noblement de la gloire de leurs ouvrages & de la protection des gens riches. Plusieurs d'entre tous ces écrivains cependant, eussent peut-être mieux labouré la terre, mieux fabriqué du papier qu'ils ne font des livres, & sûrement eussent été plus utiles à l'état. *Rém. sur les Avantages & sur les Defav. de la France, &c. p. 50.* A l'égard de la culture des terres, nous sommes riches en livres anciens et modernes qui traitent de cette science: mais ce sont des richesses dont nous ne pouvons jouir, soit par le dégoût qu'emporte avec lui un amas confus de connoissances sans méthode, d'expériences sans philosophie, de raisonnemens sans pratique; soit parceque ses livres contiennent une infinité d'erreurs répétées successivement, que les yeux seuls de l'expérience peuvent distinguer de la vérité.—Ib. page 185—Cette agriculture de cabinet est tres-bonne pour amuser le loisir de ceux qui n'ont pas un revenu à tirer de la terre ou qui ne la connoissent pas. *Princ. et Observ. oecono. V. 1. p. 220.*

comes alike—the same authority paints the whole. The *old* husbandry is universally run down—because it is the old—not because the *new* is better. Thus it is advised to transplant turnips—to sow carrots and parsnips in drills; nay, even parsley—and, stranger still, clover! And what is still more capital than all the rest—quotes from an absurd author*, (as if to recommend the thing) a piece of advice to buy three hundred sows, to be fed after they pig on boiled turnips, and then they and their pigs are to be turned into clover while the pigs are sucking. It would make the reader nauseate these papers, if I was to give the stuff at length. The vilest heap of absurdity that ever disgraced common sense! People who are eager in their husbandry, read such books; and as these ridiculous practices come recommended to them by those who ought to know better, they are tempted to try them. They do so—and of course fail, to their no inconsiderable loss; hence a disgust is taken at the very idea of experiments or *book-husbandry*; the door is shut against beneficial

* *Harold Hill* the Poet.

trials; and a whole neighbourhood of farmers clap their hands with pleasure at the gentleman's disappointment, determining never to be misled by books into any *new tricks*, which only tend to impoverish them. Such are the consequences of giving attention to collections of agriculture: which, without hesitation, I pronounce to be the most pernicious books that are published—which tend to the utter extirpation of all useful experiment-making, and bring an odium on every thing *new* in agriculture.

I have conversed on the subject with several gentlemen and common farmers, recommending to them some trials which I thought of consequence: they generally answered me with some shrewdness—
 “What! try experiments of this and that
 “and t’other?”—“Aye; why not? See
 “here, don’t you find how greatly it an-
 “swered to this person?” “To that per-
 “son! Very good—Try experiments be-
 “cause J. G. N. O. and P. R. tell me
 “they’ll answer—No, sir—I leave ex-
 “perimenting to you—I’ll have none
 “on’t.”

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It has been said several times, and with very great justness, that what we want is a *Book of Experiments* *. If any practical intelligent husbandman, who occupied a middling sized farm, would only keep an exact register of all his business—such a collection would form, as far as it extended, a complete set of experiments †. Let us

* See the *Essays on Husbandry*, and The Inquiry made after a Series of Experiments in Agriculture for 75 years; made about the time of the Restoration.

† I cannot open the *Essays on Husbandry* without meeting with passages in every page of a stamp peculiar to the author, who every where *thinks for himself*, and that with such uncommon penetration, that his volume, were it printed in a small size, would be the *pocket-book* of every curious cultivator. There is a justness of ideas, a strength of expression, and a liveliness of remarks in the following passage that are admirable. “Notwithstanding I look with pleasure upon georgical writings, composed by scholars, blessed with fine parts and lively imaginations; yet, at the same time, I take not the least offence at certain inaccuracies, in stile and *physical* knowledge, when I peruse the husbandry-writings of downright yeomen and farmers; whilst at the same time more fastidious critics may spare themselves the pains of giving vent to their remarks, merely because these plain sensible authors may never have heard who a critic is, nor would they regard him if they heard his remarks.—The ΕΜΠΕΙΡΙΑ & ΑΥΤΟΨΙΑ * of *Dioscorides* are an irre-

* Experience and ocular observation.

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us look over Mr. Randal's *Semi Virgilian Husbandry*, and Mr. Lisle's *Observations on Husbandry*, and it becomes apparent at once, what a vast difference there is between registering experiments, and publishing books of agriculture, in consequence of having made experiments.—They have certainly infinitely more merit than treatises written by people unpractised in the business—but consist only of the inferior part of experiments; that is, the *remarks* and *conclusions*: so that we have only the author's reflections, instead of that authority which enabled him to reflect; and from which we might draw very different conclusions.—Hence arises the difference I mentioned: *the experiment is truth itself*—the author's conclusions, matter of opinion, which we may either agree to, or reject, according to our private notions.

fragable answer to these holiday-observers.—Such a plain practical author as *Gabriel Plattes* pays his little contingent to the republic of knowledge, with a bit of unstamped real bullion, whilst the vain-glorious man of science throws down an heap of glittering counters, which are gold to the eye, but lead to the touchstone." *Essay* 1. p. 194.

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The two books I mentioned consist of a great number of remarks *really* made on husbandry—and Mr. *Randal's*, drawn into very long instructions, on some prodigiously expensive practices. A relation of such, having answered in fair experiments, would satisfy the reader—but mere assurances and general remarks are of no authority. And I may perhaps be allowed to add that *chemical* inquiries will prove of but little use; and that *mathematical* calculations are mere trifling. But in respect to good husbandry-writings the *English* language contains few that are of great note: amidst the immense number of publications in general, on all arts and sciences, and even of great character and reputation, it is surprizing so few should have gained a moderate degree of fame by works on husbandry. The remark which *M. de Boulainvilliers* makes on this subject in *France*, is equally applicable to *England*. “It is prodigious to see the discoveries which have been made in our days in certain *useless* sciences, or at least unnecessary ones to society; while those, upon which population, riches, and consequently

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ly the power of a state depend, have been neglected by such a number of authors, who have written upon other matters really frivolous*."

* *Les Intérêts de la France mal entendus.* Vol. 1.
p. 80.



L E T T E R VII.

I Shall not enter into a full inquiry of the great consequence timber is of to a maritime nation; that is a point so clear and undisputed as to need no elucidation: I shall only speak of it as it naturally forms an important object in rural oeconomics.

There are vast tracts of land in this kingdom, which would answer better in plantations of trees, proper for the soil, than cultivated to the purposes of agriculture. The real interest of the country requires that none but the worst lands be covered with wood, instead of which we every day see some of the best land of a farm taken up with coppices and timber. But of all soils, none are so well adapted for the production of underwood as those extreme wet ones that will not answer draining and cultivation. *Aquatics* thrive on such to very great profit.

The great and important object is timber-oak; this will never be planted in large quantities but by men of considerable landed property; for there is no transplanting

planting oaks into any corner, or in hedge-rows or in avenues, as is practised with other trees that have no tap-roots. The only effectual way of propagating them is to *sow* a whole field at once with acorns, and keep it perfectly well fenced in and weeded: a small corner of a field, indeed, will do, if entirely fenced in; and these plantations on a small scale, I wonder are not more common. Half an acre here and there, about a small estate would not be felt; and if triangular corners are taken, only one fence in three would be to do new. But we rarely see this public spirit, which is no where more apparent than in the planters of oak; because nobody can expect to reap although they sow.

But noblemen and gentry of large estates, cannot do more public service to their own posterity and their country, than by planting such tracts of land as will not answer so well otherwise to cultivate: and if profit is all their attention, there are many species of timber and coppice-wood which would pay nobly for the expence of planting. Think of the vast quantity of land which is occupied by warrens and moors, which does not even contribute to
feed

feed sheep : there are none but what will support a number of useful trees, &c. that might be turned to some profit in twenty years, and yield annual cuttings.

It cannot justly be said that it is a loss to plant coppices instead of timber-trees : first, because they will thrive in many places which will not do for timber : and secondly, any plantations, which, by yielding firing, save timber trees from that destructive and abominable practice of cutting their heads off to turn them into pollards, and of stripping their boughs off to convert them into may-poles, by preserving what already is timber, is, in fact, the same as planting it.

These destructive practices of ruining young trees, are owing to the tenants of estates being allowed all the croppings of pollard ones for firing.—There is nothing to be impeached in such a covenant, when the landlord, or his steward, keeps a regular account of every tree on a whole estate, and sees strictly that nothing is converted into new pollards : for without a constant watch, many tenants cut off the heads of young timber-trees, to add to the number of those whose tops belong to them. This
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is a general practice when landlords live at a distance, and seldom visit their farms: and whoever will take the trouble to view young pollards in such farms, will generally find them to have been timber-trees, which discovered no signs of such deformity as to render it adviseable to cut their heads off.

If there are any signs of the pollards on an estate decreasing, so as to render firing too scarce, and the landlord is unwilling to advance something to his tenants for coals, it is infinitely the best way to plant a field with underwood, large enough to yield a cutting every year, instead of letting the young timber be ruined to supply the want. And it is to be remembered, that most farmers have a great aversion to all timber trees that shade any of their arable land; not without reason indeed; for where a farm is so badly managed, as not to have a proper border of grass round every field, the trees which stand in the hedges necessarily drip on the ploughed ground, and kill whatever crop is sown under them: for this reason, in all farms that are judiciously disposed, broad borders are every where preserved; for grass

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is little the worse for trees, unless quite covered with them; and there are a thousand conveniences, besides their beauty, in these borders of fields being constantly in grass.

The only proper places for scattered timber-trees, are, either in the hedge-rows of a farm, or spread thinly about the pastures. There are some objections to the former—unless the ditches are every where exceedingly good and deep ones, trees in the hedges are apt to make gaps; for idle people and sportsmen have only to clap their hand against a tree so situated, and they break through the hedge at once, which they could not do without such a help. This, however, is but little objection when the ditches are kept in perfect repair. But if a man plants an estate himself, I should apprehend it much the most advantageous to let the trees be planted *by* the bank of the ditch, but not *in* it; for then nothing is shaded but the ditch and the borders, which is all the advantage attending their being in the hedge:—or else scattered in clumps about the grass-fields—or in corners. I speak this

of those trees which are propagated by transplantation, or setting shoots.

The most money which I have known made by gentlemen of timber planted by themselves, has been of the ash and the poplar: the latter in general is the quickest grower; but when the former likes the soil, it thrives nearly equal with the other; and in thirty, thirty-five, or forty years, either of them will grow to the value of three pounds, and sometimes more. The ash, indeed, prospers better when the keys have been sown where they are to remain, than transplanted—but the poplar is the easiest propagated of any; for if several vigorous growing pollards are kept, they will yield every eight or ten years croppings of sufficient length and size for planting; which is done with no other trouble than digging a small hole two feet deep, and with an iron crow dibbling another at the bottom of that, in which the end of the shoot is placed, ram in the mould and the business is done: with this advantage, that they require no fencing—for the trunk will be large enough to defend itself against all cattle. I have plant-

ed many in this manner that have thriven perfectly well.

The ungenerous proceeding, which will in future times be severely felt, is the felling noble timber-trees, without planting or sowing any in their stead. If gentlemen of *small* estates, as well as those of large ones, cut down trees, they ought ever to plant some others; two for one surely!—A small felling will amount to twenty or thirty pounds—a shilling in the pound would fence off a corner of a field, and sow it with acorns. Such a conduct has nothing of difficulty or expence in it; it ornaments an estate—and lays the foundation of future wealth for one's successors. It is much the fashion at present to plant; but it is not general to sow lands with acorns, for they will not *show* themselves to advantage soon enough: pines, firs, limes, chefnuts, &c. &c. are more used, because they make a figure speedily; whereas the oak takes a longer time to exhibit himself*. But it should be consider-

* *Les Intérêts de la France mal entendus*. Vol. I. p. 45.

ed, that when a plantation of young oaks is thinned, and the rubbish grubbed up and cleared, nothing is so beautiful as the fine straight trees left at a proper distance; and in respect of growth, in land tolerably stiff, I have seen them twenty feet high, and beautifully straight, at the age of fifteen years. There is no approach to a great house a quarter so magnificent as plantations of noble oaks—breaking upon the spectator at every point of view. A man cannot have the satisfaction of beholding the full effect of his labour—but the idea of perfection, which must attend it, is greatly flattering. Such plantations live after the noblest buildings are in ruin, and forgotten.

The Society's attention to this national object, as it moves the vanity of mankind in favour of the public good, is justly conceived, and very properly executed: nor is there any reason to doubt of its having an exceedingly good effect. Such numerous complaints of the decay of oak-timber, in most parts of the kingdom, probably induced that munificent set of patriots to extend their premiums to this object. And if half the complaints that

are made are true, it is but a melancholy affair: the more melancholy, when we consider how easily private people might have prevented it, had they planted even a few trees, when they cut down a great many.

If the reader turns to Mr. *Harte's* excellent *Essays on Husbandry*, he will find many exceedingly judicious hints on this subject, with some very sensible observations on several trees not yet commonly cultivated; much more to the purpose than any thing I can add to this desultory sketch.

L E T T E R VIII.

THROUGHOUT the foregoing papers I have, in every respect, considered the subjects of which I have treated, particularly in regard to *population*, and the *value* to the state, of the people maintained by several professions and businesses. I have been the more attentive to these points, as the strength and welfare of a kingdom depend so much upon them : and as the chief support of a nation ever lies in the lower ranks of its people—I might possibly have said in its poor—it will not be foreign to my general design, to inquire into the state of this chief pillar of the kingdom, and the laws which are at present in being for their protection and increase.

Population, taken in a general light, depends chiefly on the poor inhabitants of *the country*. Those of great cities, it is well known, are by no means so prolific——and the debauched, unhealthy lives that are generally led in them, are terrible scourges to the human species.

As the country is therefore the scene of those living riches which give stability and glory to the State, let us inquire how well our laws contribute to the increase and security of such wealth. If we cast our eyes over the several nations of *Europe*, as well protestant as roman-catholic, and compare them with our own, we shall find that nowhere has there for many ages, been such constant attention to this object as in *England*—indeed, in many kingdoms the legislature has not interfered in the matter, but left the whole affair to chance, and the common concurrence of accidental causes.

In this country, on the contrary, successive laws have laid on the whole kingdom, a most prodigious tax for the maintenance of our poor: in the mean amount of it for a term of years, far beyond what is commonly supposed: in multitudes of parishes exceeding greatly the land-tax at four shillings in the pound*; and, if we consider the ungra-

* *M. D'Angueil* says it amounts to 3,500,000*l.* *Avant. et Defaut.* p. 308. *Mr. Hanway* makes it but 1,300,000*l.* but that in a low calculation. *Letters on Imp.* V. 2. p. 84. *Mr. Alcock*, in his judicious *Observations on the defects, &c.* asserts it is 3,000,000*l.*

cious manner in which this heavy burthen is raised, the endless and heavy law-suits it gives rise to, we may fairly pronounce it to be the most oppressive grievance under which the subject in *England* groans.

The land-tax at 4 s. in the pound is deemed a heavy tax, and in many parts of *England* heavy it is; yet do some of the poorest towns and places, bear a much greater, by their church and poor rates. The land-tax is limited, it is raised quarterly, it is paid all into one office, the exchequer; there it is accounted for; and the accounts are subject to the examination and inspection of parliament. The people who pay, may not indeed so much regard what becomes of the monies they pay; but it most nearly concerns them, that they be made to pay as little as possible; and more than 4 s. in the pound they never yet have paid. The land-tax is laid on the profits and incomes of lands and estates; it falls on the owners thereof, and is applied for the defence and security of that property, on which it is laid; nor can it be raised without the consent of
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King, Lords, and Commons: But by 43 d *Eliz.* overseers are impowered to make rates for what sums they themselves *think fit* without any limitation whatever. And is not the property of a whole parish too considerable to be lodged in the arbitrary will of five or six parish officers, who may contrive to share the plunder of it? Reasonable objections to public accounts are generally made, to direct the oeconomy and good management of public monies, and to avoid unnecessary expences on ourselves and our posterity, by heavy debts and taxes; and would it not be right to keep parish-officers to oeconomy and good management, and to prevent their lavishing and embezzling the monies they raise, and giving in false accounts for the same? Or are they to learn the art of misapplying money, and account-making, in order to qualify themselves for higher posts of knavery? The misapplication of money raised by rates, makes men think the money raised by every other tax is also misapplied, and creates in those who are not able to think abstractedly, a diffidence and bad opinion of power, from the lowest,
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even to the highest class of government*.

The perpetual litigations, occasioned by the inequality—the chicanery and the disputes about the Poor's rates, render them infinitely burthenfome. The absurd uncertainty of the law, in all that relates to the levying this tax, gives occasion to the lawyers too often to play the harpy. If there is any standing tax for the maintenance of the Poor, surely it ought to be assessed in the most equal manner, by certain and invariable rules—and all appeals from the assessment heard by judges empowered to determine all causes conclusively, and with as little expence as possible. The very contrary of all this is the case: the law is vague, doubtful, and perplexed—the assessment is unequally, and, in general, ignorantly laid—and all appeals from it are, in other words, nothing but plunging into that dreadful abyfs the—— But to speak with less warmth, it is not in the power of even the law itself, as it stands at present, to remedy the variety of injustice which the parish rates throw up-

* *Short View of Abuses, &c.* p. 26.

on numbers of people : Look into those of a parish, which consists partly of lands and partly of houses, or large towns, and see what iniquity abounds ; for, to use the words of a sensible pamphlet in this case, “ the interest of the land-holders and householders stands divided ; and this frequently occasions manifold disputes, in which the householders have always the advantage ; for though their respective occupations are much the less in value, yet by a majority of votes they can always secure their own church-wardens ; and justices, even out of corporations, and free of all attachment, generally take the recommendation of these officers in their nomination of overseers, for want of being better informed. Thus in the stead of substantial householders, according to the real intention of the law, you have a continual succession of mean people in office, whose study and interest it is, to lay the burthens of their levies more particularly, upon the lands, altho’ their own numerous occupations increase the poor 20 to one*.” The law supposes personal ef-

* A short View of the Frauds, Abuses, and Impositions of Parish Officers, by Mr. Fonnereau 4to. 1744. p. 9.

tates in, or out of trade, or annual incomes to be rated, but what chicanery and inequality is at once manifest upon this. A gentleman possessed of a landed estate, must in consequence pay several parochial taxes; for he is rated for the house or houses he lives in in town and country, and his tenants are rated for his farms, which is precisely the same thing as if he was to pay all instead of them, for his rental is lessened in exact proportion to their rates; but yet he has an income of five hundred pounds a year, for instance, and lives at a distance from his estate: What injustice would it be to rate him for this income? He would evidently pay twice; nevertheless he is open to this injustice; for if a man has the *income*, no matter from whence it comes—it is rateable; but to use the expressions of the abovementioned gentleman, “Why should not every man who is willing to pay his due proportion, know by some certain rule what that proportion is, and what he is taxable for? An uncertain tax is the greatest grievance and oppression; for you can never know where it will end. But be the nature of the thing, or the reasons
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what they will, that stocks or personal estates cannot be rated; yet that they generally are not, is reason sufficient, that the occupations of the householders ought at least to be rated as high in proportion as the lands, and the farmers and landholders not left to the open and manifest oppression of the householders, as they are at present."

If a farmer occupies a farm of 100 *l.* a year, he is rated according to the real rent of his farm to the poor; and he pays the tythes of the produce of his lands and labour to the parson, and is rated besides to the repairs of the church, &c. he is made to bear the heat and labour of the day, and all the while can get but a bare subsistence for himself and family; whilst a shop-keeper, in a house of 10 *l.* a year, shall, on the profits he makes in a parish, get more money, and maintain as large a family, and be liable to pay no more than one-tenth part of what the farmer pays. At 4 *s.* in the pound, the farmer on his 100 *l.* a year, at the rack-rent pays 20 *l.* a year to poor's rates; the shop-keeper on his house of 10 *l.* a year, should by that rule, exclusive of stock, pay 2 *l.* But the
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shop-keeper's house of 10 *l.* a year shall be rated at but a quarter of its rent, *viz.* at no more than 2 *l.* 10 *s.* where the shop-keeper therefore pays one shilling, the farmer pays forty.

The amount of this tax, and the litigious manner in which it is collected, are not only extremely burthensome—but the *effect* of it, when raised, is, in general, pernicious to the good of the State, and detrimental to the poor themselves. Every thing provided by the several acts of parliament for their use, is indefinitely expressed—Money, lodging, apparel, food, &c. &c. as may be wanted, are all uncertain. The parish-officers collect the tax, and manage the poor; that is, they assist them as they think proper; and whoever thinks himself neglected, has nothing to do but take a walk to the first justice of the peace, and make his complaint. Law, and right, and common sense are then too often out of the question; but Mr. Justice, if popularity among the poor be his foible, saddles the parish with whatever burthen he thinks proper—and, on the contrary, if the next rank of people be the object of his attention, then the poor may ply him,

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right or wrong, with their grievances, but meet with a deaf ear to all. In this case it is easy to conceive how uncertain true right, as established by law, is ; and also that good or bad as the laws may be, their execution depends, in too great a degree, on chance.

This undeterminate provision for the Poor makes them depend on the parish for *all*. If they are exceedingly diligent, sober and industrious, while they are young and in health, what is the consequence? Why, they lay up a small sum monthly to support them easily and comfortably when aged or in sickness : this is in the power of most. But suppose they are idle, drunken, and worthless—What attends such a contrast?—Why, precisely the same effect ; ease and comfort, either in sickness or age—not from themselves indeed—but the parish. Is it not therefore apparent, that unless the majority of them be perfectly *well inclined*, the necessary consequence must be idleness! Who can suppose that such men will work the harder against old age or sickness, when every one knows so well that the parish *must* provide them

them in such a day with all their own labour could, were they ever so industrious.

I am very sensible that the miseries of the poor are often mentioned as proofs of the villainy of parish-officers: and that many of them are great villains, no one can doubt; no set of men so numerous can be found, among whom villains will not be discovered: Nor is the villainy most common, that of grinding the poor, but cheating their brethren who pay the rates. The miseries of the lower people are ever owing to the neighbouring justices of the peace, who, in this case, have power rather too ample than otherwise. But let it be remembered, that one family in wretchedness—is seen—known—remarked—and blazoned out by all—and in consequence of a few instances, the whole tribe of parish-officers are represented as a parcel of detestable fellows. But let me ask a plain question. If a parish is oppressed very heavily, by the prodigious expence of providing for a large number of idle, drunken, debauched and insolent poor—Who is it that trumpets forth their grievances? The farmers may not break nor be starved, and no open and

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apparent misery stares the spectator in the face—but are they to groan under such manifest oppression without pity, or a single word said in their behalf! Yet is this frequently the case—and at the same time the rates paid by a parcel of little farmers, who work ten times harder for a poor subsistence, than the very people for whom they are so heavily taxed. It is said they, like the poor, meet with redress from the justice—True; if they can get it—they have the chance of the justice's foible being in *their* favour—but if it is not—they must be contented—No wonder, however, that when their day of power comes they should not be so liberal as they ought. And is it natural to suppose that a set of men, who are daily witnesses of that dependance which the poor have on the parish—who see how little attentive they are to work hard against a time of want, and how seldom they will labour even common days, or common hours—who experience perpetually their insolence—in short, who behold the whole tenour of their lives—Can it, I say, be expected that such men will *freely* and *generously* contribute to the maintenance
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of people who could so easily maintain themselves?——I venture these assertions without any doubt. It is well known that the poor must, by law, be found all necessities by the parish, if they cannot find them for themselves: this *fact* is sufficient——without recurring to the testimony of common experience, I am certain every reasonable person will agree with me, that the consequence must be as I have stated it.

From these considerations, I must own myself an enemy to that *general* abuse which is thrown, so *undistinguishably*, on all parish-officers. I should again repeat, that in the affair of rates, they are extremely more open to attacks, than in the conduct of the poor. We should remember that the number of people who, by turns, serve those offices, is immense——so great that any general charge upon them, of more than common inhumanity, is absurd and ridiculous——We should not be so free in condemning so considerable a set of people unheard——we should bear in mind the tendency of the Poor laws; and rather throw the blame on those encouragers of idleness, than on a set of men,

Who, from their situation, must know the merits of the poor better than others. As much however as I have advanced in their favour, I will freely allow that great numbers of abuses are frequently found among them in the whole management of the power of taxing their parishioners. Nothing can better explain their abominable frauds, than to consider that chicanery which is often practised in towns, “ of raising numbers of small occupiers, for the benefit of their votes, in support of knavish officers; and then receiving no payment of them. By exempting the lesser occupiers, they secure a majority from raising any clamour against their exorbitant rates, made for 10 s. 8 d. in the pound, when 4 s. with proper management might have been sufficient. But though these meaner inhabitants have not paid to any poor rates, yet shall they pay, or be marked as having paid to a pretended church-rate, if made but for one penny in the pound, that they might be qualified to vote the same persons into office again, or, at least, others of the same confederacy, which amounts to the same thing. These churchwardens, thus re-chosen, must now think
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both of gratifying and carrying on an interest with those that chose them: money only can do this, and money they are sure to have, for the small trouble of calling their honest voters together at a parish-meeting. But such mean inhabitants will not be satisfied with being exempted from paying to rates; they have other advantages in view; they have a fellow-feeling with their church-wardens; they are employed by them; they shall do unnecessary work, and charge their own quantity and price for it; they shall riot at a parish expence; they shall procure large collections for their friends and relations, out of the monies received by poor-rates; and many shall be exempted from working, and receive money to live idly upon. Church-wardens shall let parish-lands to their friends at under-rents, or occupy them themselves at what they shall please to allow; or without allowing any thing at all; and a majority shall justify all acts.

“ Church-wardens, under colour of their office, by the strength of a hired majority, are allowed to carry any point, though ever so unjust; and if you will dispute it with them in *Court-Christian*, the

inquiry seldom goes further than the form of a rate; it is called a rate for the church; it is made by a majority of those present in vestry; the majority binds the minority, and the present conclude the absent; so that a rate made to raise money, in effect, to treat and bribe a majority, or for any other purpose, however foreign to the duty of their office, must pass as a good and legal rate. Great indulgence do church-wardens meet with in the courts where they are accountable; and seldom are they punished for any misapplication of monies. The tediousness and expence of suits, with the manner of proceeding in those courts, are sufficient to deter any one from attacking them therein; and if you do attack them, and after great expences and delays, cast them in Court-Christian, you cannot well recover of them; for they are generally unable to pay, unless they can raise more money by rates. The church-wardens must therefore make rates with plausible titles, and with the consent of a majority in number, and that is enough for Court-Christian to justify under; for it is so established as their law by custom;

tom; and a most excellent custom it is! *"

It is agreed, by the most sensible politicians, that the true riches of any state consist in the employment of the labouring poor †; and all countries will flourish in proportion to the quantity and value of their labour. *England*, I have already proved, depends chiefly on the culture of the earth, which is principally effected by them—consequently any loss of labour is a loss to the State. A waste acre of land is a public nuisance; and, in like manner, the loss of a single hour's work, of a labouring hand, however small, is nevertheless a public one; and it is necessary, by enabling such hands always to find employment, to prevent such a loss. What a wretched policy must it therefore be, by any misguided laws, to give the least encouragement to idleness, which is constantly attended with such a prodigious loss to the public! That the poor ought to be

* *Short View*, p. 24.

† Mr. *Hanway* calculates a labouring man's life to be worth, on an average, 412 *l.* 7 *s.* 5 *d.* *Letters on Imp.* Vol. 2. p. 95.

well fed—well cloathed—and live in that *warm* comfortable manner, requisite to *Englishmen*, is a point of undoubted consequence—and which cannot be contradicted; but the enabling them to live in this manner, at the expence of the public good, in a loss of a part of their labour, is the grievance I at present complain of.

Compare the present state of our poor, in respect of laborious industry and sobriety, with an ideal state of them if this *total* dependance on the parish was at an end. On *this* side the way lives a little farmer, an excessive hard-working man, very sober, and yet scarce able to live—On *that* side see a poor family, they will eat much better than the farmer—have their tea once most certainly, and perhaps twice a day; will not work harder than part of their present maintenance requires; for twenty to one but the parish pays their rent, and finds them wood; and if the least sickness or accident happens to any of them, they immediately become chargeable—and when old, and past hard work, wholly so; whereas the money they have spent in the single article of tea and sugar, *saved*, would entirely have prevented
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ed such charge—or constant labour while in health, doubled to themselves the amount of it.—Compare the little farmer with these his neighbours—Is it by any means just that *his* industry should be taxed to support *their* idleness?—But all I have said in relation to these country labourers, is a hundred times more striking amongst poor manufacturers—when *they* work tolerably, they earn much more than the pay of the labourer, consequently are able to indulge proportionably in idleness, &c.

I never omitted any occasion of making whatever remarks I was able on the conduct of the poor, in relation to their dependance on their parishes: and I never yet knew one instance of any poor man's working diligently, while young and in health, to escape coming to the parish when ill or old. Some will aim at taking little farms—but if, by any means, they are disappointed in their endeavour, they consider the money they have already saved as of no *future* value, but spend it long before they really want it. I have frequently heard labourers, in the full perfection of their strength, talk of the parish

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maintaining them, on the very idea of any accident and illness; men, whom I have personally known to earn two-pence, three-pence, and four-pence a day more than the common pay of the country, and which others, while in health, are obliged to subsist on. I have constantly experienced, and for some time, that numerous families that are completely clothed by the parish, will let their cloaths drop in pieces, without being at the trouble and expence of ever *mending* them, at the very time they have every day drank their tea sweetened with nine-penny sugar. It would be endless to particularize all the multitude of instances which myself, and I will answer for it, every other farmer could, from their own knowledge, quote of this kind: and whoever attends to these points among the poor, will *always*, I may say, find it owing to the certainty of falling on the parish when they are in want*.

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* “ The nation is not only weakened for want of a due proportion of inhabitants; but it is also greatly distressed by the sloth and idleness that prevails among the poor, great numbers of whom are, in a manner,

I therefore am tempted to think that the present laws, relative to the support of the poor, are universally encouragers of idleness, drunkenness, and tea-drinking amongst them; and that, as such, they are highly pernicious to the welfare of the kingdom.

And here, I cannot but observe, that, as low a figure as *tea-drinking* may make in this trio—it is nevertheless of wonderful extent and consequence: *As much superfluous money is expended on TEA and SU-*

manner, legally entitled to live without industry. One of the objections against a standing army, in time of peace, is the great expence to the nation, of maintaining 16 or 20,000 idle men, who ought to support themselves by their own labour; yet we give no attention to the burthen of another army, consisting of no less than 600,000 persons; for such the number of those receiving alms was computed to be about 60 years ago, and it has rather increased than diminished since that time. Supposing one half of these were really invalids, or infirm, who were justly entitled to public charity; is it not however a disgrace to our national policy to suffer the other half to prey upon the state, when, by proper regulations, they might be made to contribute to the support of it. Hence, the act for the maintenance of the poor is stiled by an eminent writer, the true bane and destruction of all the *English* manufactures in general, as it apparently encourages sloth and beggary.” *Reflections on the Domestic Policy proper to be observed on the conclusion of a Peace, 1763.* p. 87.

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GAR, *as would maintain four millions more of subjects in BREAD* *. If it is considered what a fatal enemy excessive tea-drinking is to the human body—how much it impairs the vigour of the constitution, and debilitates the mind, the pernicious influence of it will be apparent; and it should be remembered, that the ordinary adulterated sort, which is drank by the poor people, is attended with much worse effects than the finest sorts used by the rich. It has been asserted, and I believe on very good authority, that excessive tea-drinking is of more fatal consequence to the increase of the human species, than even the immoderate use of spirituous liquors. Nor should it be forgot, that the trade we carry on for tea is totally *against* us in the balance. It is a branch of commerce by which we perpetually lose: thus burying our money in an unfathomable gulph, for a pernicious commodity that tends to our very ruin. Our legislature taxes every *necessary* of life; surely this vile *superfluity* calls aloud, in its abuse, for greater restrictions! But what are we to think of a

* *Essays in Husbandry*, p. 166.

conduct,

conduct, diametrically opposite, of lowering the duty upon this pernicious drug, that the people may be able so much the easier to consume their health, their time and their money ! To enable them universally to drink it *twice* instead of *once* a day. It will not surprize me to hear of its being rendered yet cheaper, *that the public revenue may flourish*. Those very *poor*, who now cost the nation two millions to maintain, will then, I suppose, drink it *thrice* a day, and at last substitute it totally in the room of bread ; the *cultivated vegetables* of *England* to be sure cannot nourish them ; they must have recourse to the weeds of *China*. What wretched politics ! To imagine that the revenue of the public can be improved by lavishing away the time of the labouring poor ! Such an idea is congenial alone with the last ruin of a State.

Now the duty is lowered, the entertainment of sipping tea costs the poor each time as follows :

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The tea,	-	-	$\frac{3}{4} d.$
The sugar,	-	-	$\frac{1}{2}$
The butter,	-	-	1
The fuel and wear of the tea-equipage,			$\frac{1}{4}$
			—
			$2\frac{1}{2}$
			—

N. B. This article in general costs much more, but sometimes we suppose the fire not made on purpose.

This is a tea-drinking for one person, or woman, and perhaps a *little* girl; if the company is larger, all the articles will be swelled.

Two pence halfpenny a day, is 3 *l.* 16 *s.* a year, and if it is drank twice a day, it amounts to 7 *l.* 12 *s.* At page 199, I inserted the present expences of a labourer's family of five persons; bread amounted to 5 *s.* 8 *d.* a week, which is *per annum*, 14 *l.* 15 *s.* 9 *d.* Now the above tea-drinking sum, 3 *l.* 16 *s.* is more than a *fourth* of this cost of the bread, eat by a family of five people! Or, in other words, the wife leaving off tea, would be sinking

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the price of wheat to the whole family a fourth: when it is 6 *s.* a bushel it would lower it to 4 *s.* 6 *d.* And if the *tea* is drank twice a day, *bread* sinks on leaving it off half the price.—If these facts do not prove, that tea-drinkers have no right to complain of the price of wheat, I know not what can. Yet, to use another's expression, it is amazing how the people are tea-bitten, and become as tenacious of drinking this infusion, as a mad dog to avoid drinking at all.

The law of *settlements* is attended with nearly as many ill consequences as that of *maintenance*. I have said enough to prove of how great importance our labouring poor are to the public welfare; the strength of the state lies in their numbers: but the prodigious restrictions thrown on their settlements, tend strongly to prevent an increase of their numbers. One great inducement to marriage, is the finding, without difficulty, a comfortable habitation—and another nearly as material, when such requisite is found, to be able to exercise in it whatever business a man has been educated to, or brought up in. The first of these points is no such easy matter
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to be accomplished ; for it is too much the interest of a parish, both landlords and tenants, to decrease the cottages in it——and above all, to prevent their increase, that in a process of time habitations are extremely difficult to be procured. There is no parish but had much rather its young labourers should continue single ; in that state they are not in danger of *becoming chargeable* ; but when married the case alters : all obstructions are therefore thrown in the way of their marrying ; and none more immediately than that of rendering it as difficult as possible for the men, when married, to procure a house to live in——and this conduct is found so conducive to *easing the rates*, that it universally gives rise to an open war against cottages.

But suppose the young labourer or manufacturer to be an inhabitant, by sufferance, of a parish to which he does not belong ; the officers of such parish, the moment they hear of his intention to marry, give him notice to quit their parish, and retire to his own, unless he can procure a certificate that neither he, nor *his*, shall ever become chargeable to them. The man applies to his own parish for such certificate

tificate——“ No; grant a certificate! Never will we do that——Let marrying alone, and live where you are——but if you come here with your wife—you know what lodging we have for you; our houses are full already.”——Such is the language in answer to the request; and in millions of instances is attended with the desired effect. The intended couple dread the *disagreeableness* (perhaps *impracticability*) of living in a little cottage with several other families—one to themselves is not to be had——if any are actually empty, the landlords of the parish take care they shall not be so filled: nay, how often do gentlemen, who have possessions in a parish where such cottages come to sale, purchase them, and immediately erase them from the ground, that they may never become the *nests*, as they are called, of *beggars brats*; by which means their tenants are not so burthened in their rates, and, of course, their farms lett the better:——for the *rates* are considered as much by tenants as the *rent* of a new farm.

In this manner cottages are the perpetual objects of a parish jealousy——The young inhabitants are deterred from mar-

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rying, because of the difficulty of procuring an habitation: a hearty stout labourer that earns good wages, aims at having a neat comfortable house to live in, and cannot bear the idea of living in common with others: but all his wishes are too often frustrated by the scarcity of cottages. Nor is the hardship of removals less: a man is resident in a parish, where, by his connections, or nature of his business, he is much better able to maintain himself than in any other place—this circumstance often is, as three to one.—He marries, immediately he receives warning to quit this place, where, alone, he can advantageously support himself, and is driven to another to live in a ten times more uneasy manner, and where he is unable to make near his former earnings. His lot is hard; and his example hangs *in terrorem*, to prevent others from being guilty of the folly of marrying.

In whatever light we consider these points of settlement and maintenance, they will regularly be found to encourage idleness, and prevent population. Two greater mischiefs cannot happen to any nation than these; and a country, which is entirely

entirely supported, like this, by the industry of its inhabitants, ought, in every possible manner, to rectify any such tendency in its laws; for it is surely a most melancholy reflection; that vast sums of money should be raised for the direct contrary effect to what they really are attended with.

What we therefore want, from the wisdom of the legislature, is a total abolition of all our poor laws, and the immediately framing others in their place, which would not be liable to the same objections. The foundation on which such new laws should be laid is clearly—*To maintain those who CANNOT maintain themselves, and who could not have saved a sufficiency to support them when they can earn little or nothing.* For if hearty strong young people are to spend in superfluities (particularly tea) and lose in good times by their not working a full portion of labour—what would maintain them when sick or old, such should have no relief from the public. But all who meet with misfortunes of lameness, or ill health—or are otherwise incapable of maintaining themselves, who, while in better circumstances, behaved industriously and frugally—on such certificates from the

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minister,

minister, &c. they ought to be taken perfect care of :—Not, however, in the parish by pecuniary gratifications ; but in *Hundred houses of Industry*, which will prove ten times as effectual in whatever concerns their life, health, and welfare.

And, as a means of preventing the poor being so blameable in future times, such houses of industry should, indiscriminately, take all poor's children who apply for relief, or who, having large families, cannot properly bring them up without assistance from their parish. This would be attended with a wonderful effect ; for nine out of ten of the worthless among the poor, were brought up by their parents in idleness and pilfering. By maintaining them in such a *House*, they would be made to work at a variety of unlaborious businesses—they would never be suffered to be idle—they would be kept from all thieving and beggary ; and when of a proper age introduced to the world with a fifty times better chance of prospering in it, than such as issue immediately from their parents cottages—In general I mean ;—there is no argument but what will admit of

of some exceptions; but in this case I am certain they are extremely few.

Whatever management of the poor took effect, they ought never again to have a *certainly* of being maintained by others, when a day of want came.—Such assistance should be freely granted to all who deserve it, but to no others.—Was this once the case, they would bestir themselves while in health and youth to practise a life of sober industriousness, that they might be entitled (when misfortunes came that were past their power to remedy) to protection and maintenance from others. Nor can I see where any hardship can be found in this—for asserting it, is nothing less than saying, That diligent, sober, and valuable people are to be taxed to maintain others in drunkenness, idleness, and debauchery. For where is the difference between paying them the wages of such iniquity, and maintaining those in sickness and old age, who spent the produce of their health and youth in ale-houses and at the tea-table? If there is any such difference, my apprehension is not quick enough to catch it.

Let us consider what prodigiously useful establishments, what noble foundations for future industry and sobriety might be laid, with the vast sum our present poor rates would pay the interest of——Take an account of the mean sum raised by each parish——ease the whole nation of half, or a third, of such amount, and on the credit of the remainder, borrow the sums sufficient for extending the houses of industry over the whole kingdom——limit the reception, as I before-mentioned, and the infinitely good effects would be apparent in a term of years——the good of them could not be perfectly understood, until the children brought up in them were put into the world in services, useful trades, and occupations of husbandry. In a future generation we might expect a different race of poor.

The most common objections to these *Houses of Industry* are——The hardships of confining elderly people, and taking them from their *connections*; and, secondly, The great fear there is, that the gentlemen who are the trustees will not, in future times, after the *novelty of the scheme* is over, give that due attendance in inspecting the
conduct

conduct of the overseers and managers, that will always be requisite for the good of the poor.—As to the first objection, it certainly has no real weight; for those who cannot maintain themselves, but live at the expence of others, have no reason to complain of the *method* taken, provided the thing is properly done: it would be ridiculous, in any establishment of this nature, to allow full liberty for the poor of the house to wander about the country at their pleasure—it would counteract the very design of the foundation, and be productive of multitudes of evils. As to the *hardship*, there is none in it; for the question ought certainly to be reduced plainly to this; We are to have the burthen of maintaining you; is it not reasonable that while we maintain you, we should do it where and in what manner we please? We will neither allow you to be vagabonds nor tea-drinkers—and those two circumstances are what raise a spirit in the poor to oppose the scheme in general. People who have spent their lives, without laying up enough to support them while old, in a country so full of employment of all kinds as this is, to refuse alli-

stance unless they have it *where* they like, might as well make a bargain for the best green tea and twelve-penny sugar every afternoon, before they accepted of warm cloathing, wholesome food, and a good house over their heads.

As to the point of the trustees, I freely own the objection is of great weight, and I do not in the least doubt that a part of the benefit which has hitherto been found to result from the few *Houses of Industry* established, is owing to the attention of the trustees, and their constantly meeting on the appointed days to inspect every part of the officers management. But if it is suspected that this attention will, by degrees, wear off, it surely might easily be inserted in the act of parliament, that such a number of trustees *shall* meet at the time appointed, under certain penalties to be levied on all who absent themselves. There would be nothing unreasonable in such a clause, and it would effectually remove the objection.

As I have been particularly attentive to the effect of every thing I have mentioned in these papers, on population, it may not be foreign to the present subject, to
consider

consider of some means of promoting marriage amongst the lower people. It has been observed by many authors, that it is *manners* alone which increase or diminish the number of people; and a very penetrating one of our present age, says, "Thus, when *Augustus* made laws against celibacy, those very laws proved the *Roman* empire to be on the decline." And it has been remarked, that laws and ordinances to encourage matrimony, agriculture, &c. only prove a disease, but will never effect a cure*. There is some reason in these assertions; but there is a circumstance not generally remembered with them, which abates greatly of their validity: *The UNIVERSAL increase of what is called Luxury.*

It is impossible, as we possess the art of printing, that the world should ever fall back into ages of darkness and blind ignorance: and as the invention of mankind is ever on the wing, in adding convenience to convenience, and elegance to elegance — as fresh branches of commerce are daily opened, and the products of every

* See *Emile*, tome 4.

clime greatly multiplied in civilized countries—a general increase of what is commonly called luxury must necessarily be the consequence—and I do apprehend, as the *manners* of mankind grow more polished and refined, the more they will tend towards those vices which arise from a great inequality among them; and hence springs that celibacy * complained of, and that disregard of agriculture. And the causes which thus operate, being gradual—sapping, most imperceptibly to indi-

* The following observations are very just; one instance only is taken, but it is in a moment to be extended to a million; and all together, form a system of expence, that renders *matrimony* in numerous cases but another word for *ruin*.—"The grandeur of equipages, amongst other expences, cuts deep against plenty, marriage, and population. If a young gentleman, or the daughter of a tradesman in good circumstances, in the height of her youth and health, thinks she has lost the use of her limbs, and must have two horses to draw her about, a man to drive them, and another to attend behind; they will now cost her husband the interest of 5000*l.* which is a handsome portion for the daughter of an Earl. Some Earls could not give more 50 years ago, and some can hardly give so much at this day. Thus by the tyranny of custom, many a young lady and gentlewoman in the spring-time of their youth, and the blossom of their charms, are shunned, as if men were afraid of being poisoned if they come within their atmosphere. *Letters on the Imp. of the Rising Gen.* Vol. 2. p. 172.

viduals,

viduals, the ground-works of simplicity and every species of frugality—and having their foundation in the very soul and spirit of the times——it is impossible that laws and ordinances, which are framed according to the aspect of the day, can regularly combat with the very nature of things.——Thus far the objection has weight.

But does it follow, that because such a conduct cannot have an unbounded and universal effect, it should therefore entirely be given up? Or is it to be supposed, that because laws cannot change the nature of things, they should not improve them? The most raging torrents, even the ocean itself, are by the art of man, by the power of human laws, controuled and kept within bounds——why may we not therefore assert, that good laws may have a great effect in opposing the manners of the times?

The quotation I gave of the laws of *Augustus* is of but little effect——those laws happened to be promulgated at a time when the empire was actually enslaved——no wonder it should be on the decline——

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Arbitrary power, that canker that preys upon the vitals of the universe! had spread her black ensign over the empire——Is any conclusion to be drawn from laws made at such a period? The *Roman* people were no more: no wonder that laws were made against celibacy.

Premiums are at present offered for agriculture in *England*. It is from thence concluded, by the same author, that it will not long flourish in this kingdom. But it is supposed that husbandry, how far soever it may be off perfection, was never so effectually practised as at present. We suffer no change in our constitution, but are, in every apparent respect, in a most flourishing situation.——Extend the prospect——Look into a future age, and suppose (what my soul shrinks to conceive) our liberty no more. Premiums may then be given for agriculture; and an argument drawn that *England* is on the decline——Wonderful sagacity that!——*England* will be ruined, and those premiums quoted as a proof——premiums which can have nothing to do with it, and which could prove neither on the one side nor on the other.

other.—But take any nation just enslaved, and I defy the most sagacious politician to quote one public premium—law—act—deed, or any thing else, which will not tend to prove such nation undone—or, as it is said, *on the decline*; but at the same time it may be far from proving that the very same public acts, *in a different period*, would not have been attended with very different conclusions.

The premiums at present granted in *England* prove clearly enough that agriculture is not advanced to the perfection it is capable of, and that a set of public-spirited individuals patriotically endeavour to advance it as much higher as they are able: But can we conclude from hence that it will soon decline? Let a change in the constitution come when it will, it declines and fades away that moment; but such a falling off has nothing to do with premiums. In the same manner laws against celibacy are to be considered; if conclusions must be drawn from them, every attendant circumstance is to be considered before *one maxim* can be founded on them.

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If a country, whose inhabitants are on the increase, forms laws for the encouragement of matrimony, it is beyond a doubt such laws, if properly framed and duly executed, will be attended with *some* good effect——the manners and principles of the times may bear the *most* sway; but this does not prove that every thing else is attended with none at all. I would not, however, be understood to mean by such laws, *positive* ones; but such as will effect the desired end, by creating inducements in the lower people to marry. For instance, an act of parliament, which occasioned a regular increase of employment, would necessarily increase the people in process of time. But as to laws enacted directly against celibacy, or to reward people for marrying, it would be an absurdity to frame such.

If therefore the legislature of this kingdom may make such laws, to encourage population, as in their wisdom appear the most wholesome, without the imputation of acting vainly, and without any probable good effect;——surely we have great reason to wish that some such were framed. I have already endeavoured to shew that
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an alteration of our poor-laws would have an exceedingly good tendency in this respect, and what remained would consist chiefly in rendering the marriage state more easy than it is at present among the lower people, and, if possible, make a large family be of no inconsiderable value to the father of it. Marriage will ever flourish, when there is no danger of children proving an incumbrance. It is well known that *Colbert* exempted every poor man in *France* from all taxes that had ten children; and in the same kingdom we find, by the Marquis of *Tourbilli*, that the peasants on his estate married freely and begat children, when he had provided a maintenance for them in constant employment; whereas, before he improved his estate, they avoided marriage as the greatest evil. I mention no particular plan of encouraging marriage; it being sufficient to point out the expediency of the measure——The forming a bill will be more wisely performed by the legislature, from their general information, than the schemes of any individual *.

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* Je me réduis à examiner les moyens de parvenir à la connoissance circonstanciée de la population de l'Angleterre,

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There is one more point on which I shall venture a few reflections, as it materially concerns the population of this kingdom; and that is, the migrations of our people to the colonies.

I think I have proved that the most important object of our attention, whether considered in the light of trade, commerce, manufacture or population, is the duly cultivating the many vast tracts of waste land, which are in so many places to be met with in this kingdom. Until this object of attention be completely finished,

gleterre, & de faire un usage utile de cette science, bien intéressante sans doute, toute simple qu'elle est, puisque la population est le signe certain qui nous apprend l'état de la santé du corps politique : le moment où elle est la plus florissante, est sûrement le moment de la plus grande force de tous les états, dans tous les gouvernemens. On donne des éloges dans la Société, à celui qui s'occupe de l'étude des moyens de multiplier ces animaux vils utiles que l'homme force à le servir dans ses travaux ; combien doit-il paroître plus louable de méditer, & de contribuer à la multiplication de l'espèce de l'homme, cet être le plus noble à ses yeux, d'entre tous ceux qui respirent sur la terre. *Avantages & Désavantages, &c. p. 270.*

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and the lands already under culture improved to their utmost, it is impolitic to encourage any but necessary manufacturers—and infinitely so to encourage those that work on foreign products—I must here add, that it is yet more impolitic to suffer, in such circumstances, any but *necessary* migrations;—for the most advantageous colonies we can plant, are on our barren lands at home; the consumption of our manufactures, *if that is the plea*, will be as great from a colony settled on *our own wilds*, as on *American* ones: the security of their consuming our own manufactures infinitely greater, and the wealth arising from them to the nation of the most truly valuable kind. Let us people all the heaths of *England*, *Scotland*, and *Ireland*, and such increase of subjects will never cost us some thirty, forty, or fifty millions to defend.

I know not, in imagination, a more melancholy reflection than the thought of some thousands of poor *Germans* coming over to *England*—here supported by charity—and then, because we did not know where to bestow them, to ship them off to *America*, for their children, in another

age, to draw the sword of r———n, and plunge it in the vitals of their *mother-country*. Shame to our monstrous land-possessors!——Shame to those *great men* who possess whole counties of uncultivated land!——More to their glory would it be to expend a *part* of their wealth in adding to the riches and population of their country, than to waste the *whole* in the career of nauseous *vanity*. Judge not of a nobleman's *greatness* by the number of footmen before his chair,——but the number of labourers on his estate; and never forget that there is fifty times more true lustre in the waving ears of corn, which cover a formerly waste acre, than in the most glittering star that shines at *Almack's*.

The sensible author of the *Essays on Husbandry*, quotes a query proposed to this nation in the reign of *James the First*——
 “ Whether our colonies had not dispeopled
 “ us visibly, and thrown a damp upon
 “ the culture of the earth? *England* began
 “ its plantations near an hundred years after
 “ *Spain*, and consequently the effects
 “ thereof are not yet so visible as in the
 “ other kingdom. But our inhabitants
 “ are sensibly wasted already, and it has a
 “ very

“ very ill effect upon our tillage and husbandry in all the southern parts of the island.—So that, as the *trade of England grows* by the plantations, the *lands of England fall*; the gentry and the nobility sink, and the security and strength of the kingdom abateth.”—

I am very far from asserting that *colonies* are, in general, prejudicial to a kingdom; I would only endeavour to prove, that they are so if planted before population is at its height at home—and that it is a great absurdity to form migrations to wastes and wilds three thousand miles off, when we have so many amongst ourselves. And I am certain, that it has ever been held the wisest policy to procure, by the most judicious means, a full complement of inhabitants—any measures that tend to a contrary effect, voluntarily embraced, must therefore be highly impolitic.

One of the most important instances, in which our colonies have proved advantageous to this kingdom, has been the providing a settlement for vast numbers of foreigners, who have taken refuge there: This circumstance should teach us the pro-

per use of plantations in general, which ought to be used as the means of increasing our own numbers, by diminishing those of our neighbours, and not by removing our people from the *principal* dominion to the extreme parts, under the ridiculous notion that every one *there* finds employment for five *here*: than which there cannot be a greater falsity; for at that rate all the inhabitants of *England* would be now employed in furnishing the colonists with manufactures; instead of which, their own manufactures advance with such speed, that we may speedily bid adieu to supplying them at all; owing, however, to a series of very wretched management.

But were foreigners the people we chose to plant in *America*, we should at least have the satisfaction of losing nothing if we did not gain; whereas, by encouraging our own people to settle there, we undergo a *certain loss*, and for an *uncertain* gain at best. Breaking regiments in *America*, and inducing the officers and men to accept of grants of land, is depriving this kingdom of numbers of people it wants not to get rid of; for if it is a benefit to have

have settlements to take off turbulent and unsettled spirits, or those who fail in their endeavours to live at home; yet most certainly there is no benefit in their taking off people that could maintain themselves at home, and a great number of the individuals, that compose a military corps, may surely be supposed to come within this description.

But there is a *particular* circumstance in the present case, which merits the *greatest* attention—and that is, the *security of preserving* our colonies. For if we have poured forth *our own* inhabitants to people *them*, and involved ourselves in vast debts to defend them; it is a melancholy consideration if there is, even in idea, the least reason to fear a loss of the advantages we gain by them.

The probability of our colonies shaking off, what *they* call the yolk of their mother-country, is a subject of too extensive a nature for me to debate in these desultory papers. But a remark or two on a point of such great importance, will not be misplaced.

We should remember, that our continental plantations are spread forth over

such a prodigiously extensive country, now at their command, that were it a quarter peopled, it would form the most potent empire upon earth—An empire, to which our *European* dominions would form, on comparison, but a pitiful province.—We should remember likewise, that were these colonies peopled, all *South America* must infallibly, in the natural course of all human events, fall under their dominion. A northern nation possessing *iron*, has ever conquered southern ones that roll on *gold*:—besides, the different capacity and dispositions of the inhabitants of those two parts of *America* are so very opposite, that such an event as I have described, would be effected almost without a blow—It would be like a battle between the *Iroquois*s and the original *Mexicans*.

Nor is it totally foreign to this idea, to remember that arts, sciences, and empire travel westward with the sun: This circumstance did not escape Sir *W. Temple*. “Sciences and arts,” says he, “have run their circles, and had their periods in the several parts of the world: They are generally agreed to have held their course from *East* to *West*; to have begun in *Chaldea*.”

dea and *Egypt*; to have been transplanted from thence to *Greece*, from *Greece* to *Rome*; to have sunk there, and after many ages, to have revived from those ashes, and to have sprung up again, both in *Italy* and other more *western* provinces of *Europe*. When *Chaldea* and *Egypt* were learned and civil, *Greece* and *Rome* were as rude and barbarous as all *Egypt* and *Syria* now are, and have been long. When *Greece* and *Rome* were at their heights in arts and sciences, *Gaul*, *Germany*, *Britain* were as ignorant and barbarous as any parts of *Greece* or *Turkey* can be now*." The case has been the same with *empire*; for though it was divided when it passed more to the *west* than *Rome*, *Spain* and *France* successively became the terror of *Europe*, and would have possessed universal monarchy, had not the politics of the moderns, in point of security against overgrown powers, far exceeded those of the antients; and this policy has improved to such a degree, that the gloomy ideas of a few modern writers, who would persuade us of danger, where there is none, is so

* *Works*, folio, Vol. ii. p. 159.

totally without foundation, that the strongest potentates can, in this age, scarcely conquer a province, without having it either wrested from them speedily, or ruined in its preservation. The conquest of kingdoms is now at an end ; let any of the great powers of *Europe* ; either *France*, *Spain*, *Britain*, &c. &c. fall into the lowest state of debility, they will not therefore become the prey of their neighbours : Even *Portugal* herself preserves her independency.—These are the arguments of modern politicians, but let me except *America* from their reasoning.

We should not conclude, because the vast territory of *North America*, at present, is in a great measure in a state of barbarity, that arts, sciences, and empire cannot one day flourish there. What Sir *W. Temple* remarked of learning in *Asia* and *Europe*, is equally applicable to *America* : All her barbarity will wear off in time, and those regions, which now are boundless forests, wastes, and wilds, will one day be peopled with flourishing cities, and adorned with beautiful cultivation ; and possessing in all their brilliancy the arts, the sciences, and all the consequences of
luxury

luxury and empire. The present flourishing kingdoms of the western parts of *Europe*, will then be in as low a state, as the art of printing will permit—were it not for that art, they would sink into the same barbarity as *Greece* and *Egypt* experience at present. Will the circle run round again? Will the Asiatic deserts once more be regions of learning and empire?—Will *Turkish* tyranny give way to *Grecian* elegance, and shall her wretched depopulated provinces once more become the path for human genius to walk in?—shall they ever more give birth to such mortals as *Socrates*, *Plato*, *Epaminondas*, *Homer*, and *Euripides*?—shall their temples be raised, and decorated by such artists as *Phidias*, *Praxiteles*, *Cleomenes*, and *Apelles*? Shall *Italy* again boast her *Regulus*, her *Tully*, her *Virgil*, and her *Trajan*?—Alas! these are but dreams—but they are pleasing ones—Why may not the day once come, when the whole world shall be in a state of knowledge, elegance and peace—when *genius* shall shine with unvaried splendor; without those attendant political convulsions, which have hitherto sullied her most glorious days!

days!——But I am wandering strangely from my subject——pardon, reader, this revery——to return——

The question turns entirely upon this point; Will the difficulties attending such a rebellion as I am hinting at, overcome the natural course of an extremely potent people, throwing off the sovereignty of another less powerful than themselves?—The difficulties, we are generally told, are these: *First*, Those arising from the vast extent of country, over which the colonists are spread, which would throw many impediments on a conspiracy or design of this nature; for such schemes, when attended with success, generally take place among a people collected nearly together. *Secondly*, It is asserted, that the present division of the country into different colonies, under various governments, different religions, &c. &c. would render such a scheme impossible, as they are as little united among themselves as ever they can be against their mother-country. *Thirdly*, That the event, supposing it was possible, must be extremely remote; for it was never mentioned as probable until the country

try is nearly peopled, and it will take many centuries to half-people the whole.

In answer to these remarks, it may however be observed——That the extent of the country is a circumstance far from proving the improbability of such an affair. I quote the *Stamp Act*: Had the country been ten times as extensive, the flame would have been the same throughout it: ——the leaders in great affairs will find a quick conveyance very easy; and one general insurrection at the same time throughout, would be connected in less time by half, than forces could be in readiness to prevent them.——But the *various colonies* is a point quoted as an objection: ——True; it may be so; but the Stamp Act! again——remember that fire-brand of rebellion. The snake cut in pieces, with the names of all the colonies wrote on each joint—with this motto, JOIN OR DIE. We know too well from that late affair, how ready they are to *join*, provided it be against their mother-country—fifty times readier than when the swords of the *French* were at their throats.—As to the third reason, it is contradicted by themselves; for it is asserted, on the best autho-

authority amongst them, that they have doubled their inhabitants every twenty-five years since queen *Elizabeth's* reign.— From all these circumstances, I think we have no reason to believe the objections of weight enough to bear down the *natural course of things*.

But here I should observe that the benefits resulting from colonies, and the probability of preserving their allegiance, greatly varies in our *American* ones. All *islands* are secure from revolt, unless the continental power become so great, as to overwhelm and wrest them from their duty; consequently insular settlements are the *most* securely our own. Another very important circumstance, in relation to all colonies, is the variation of product between the settlement and the mother-country; for the great end of peopling new discovered countries, is the procuring commodities of a different nature from the staple ones at home: Hence a sensible people would always plant colonies, in climates totally different from their own.

If we examine our *American* settlements, in this light of variation of product, we see a very material difference in their value.

lue. Their *plentiful* products are sugar, rice, and tobacco; these are commodities which we must purchase of our neighbours, if we did not provide them in *America*, and these are all raised in our *southern* colonies; as to the *northern* ones, for instance, *Pensylvania*, *New-York*, *New-England*, *Novascotia*, and *Canada*, their productions are congenial with our own, and serve only to rival us in our exports and fishery: What they may be brought to produce in shipping and naval stores, is in the womb of time; a mere uncertainty; that they have not yet supplied us with them is a fact, and we may therefore reason from it.

Unfortunately, our most populous and powerful colonies are these northern ones; who not possessing staple commodities, different from our own, betake themselves to common husbandry and manufactures, destroying therein the very idea of colonies, that of consuming the mother-country's manufactures, in return for the products of a different climate. Hence arises the greatest disproportion, between the *British* exports to the *northern*, and to the *southern* colonies, in proportion to the numbers

numbers in each; the latter being superior fifteen to one. And to this circumstance, is to be added the northern colonies running away with our cod-fishery; a very material support of our navigation and naval power.

If this reasoning is just, surely we ought to be very attentive to what colonies all new settlers move. We should discourage, and even totally obstruct *all* emigrations to the northern ones, and so far from planting new ones, transfer as many inhabitants as possible from them to the southern ones; for if we run any hazard of losing our colonies, or other dangers resulting from them, it strongly behoves us to turn them in the mean time to the best account; all which must be to the *southward*; to the north, we are to expect nothing but opposition and rivalry.—The reader, I apprehend, will not think these hints foreign to my subject; for as our own agriculture and population are made to suffer in favour of these colonies, a little inquiry into the most beneficial of them, cannot be unimportant; that while we do suffer, it may at least be for those who make us a return in exchanging
commq-

commodities, which we want to buy, for our manufactures which we want to sell.

As to the means of converting *all* our colonies, to greater advantage than we have yet drawn from them, they are (like all the really great movements in the circle of politics) very plain and simple—nothing can effect it but *bounties* upon *staple* commodities, vigorously applied. I am confident nothing in the trading-world can resist their force; but the bounties hitherto given are mere nothings.

Having thus considered, as fully as I am able, those points of consideration, relative to our population, which deserve all our attention; I shall conclude with earnestly praying to God, that *the Manners of the People* may powerfully co-operate with the *Wisdom of such future sketches of Laws*, as I have ventured to mention.

LETTER IX.

HAVING in my preceding letters ventured to point out many of the omissions in *British* husbandry, and endeavoured to explain some of the most important points in Rural Oeconomy, I shall now consider the *means of promoting our Agriculture and Population*, and of extending both to the highest pitch, which our political system will allow. The sketches which I have to offer on this subject, I shall beg leave to arrange under the following heads, which I apprehend are the means which promise most to attain the desired end.

I.

Never prohibit the exportation of corn; but in times of great scarcity, allow importation duty free.

Nothing in trade is so dangerous as being too free with prohibitions, and restraining laws; and this truth is remarkable in that of corn: A prohibition lost us the exportation to *Sweden*; since which unlucky

lucky stroke, we have scarcely sent the *Swedes* a ship-load of corn. If the ports are opened to foreign corn, it is enough, and will have as great effects as any additional precautions can insure; for it is very impolitic to restrain our own merchants from the trade of corn, and limit their carrying trade: a perfect freedom of sale will give a greater plenty of any commodity than a million of prohibitions, because, corn being an article of trade, would, in case another nation was distressed as well as ourselves, be stowed in our ports on more accounts than one, the article of the business would be enlarged, and we may depend upon it, that the more we *trade* in corn, the more we shall have to *eat*. It is idle to imagine that so rich a nation as we are, and who raise corn in general for exportation, can ever feel such a distress for the want of bread, that opening our ports will not alleviate. I am confident that since the bounty has been given, no such want has been felt in this kingdom.

Having examined the merits of the bounty, and the limits of exportation so particularly in the first part of this work, it is needless to add more than a remark,

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that without a constantly free trade in corn, no agriculture can be flourishing; without a bounty our agriculture would decline; and with many prohibitions, we should lose those benefits, our *free* exportation has been attended with.

II.

Abolish tythes, assigning to each parsonage house in the kingdom a portion of land to the amount of the mean produce of the tythes for the last ten years.

It is a very poor plea against such a law as this, to mention the difficulties attending the execution. The importance of it is too great to be neglected, because proprietors would squabble and quarrel about the partition of lands. An express law, with a clause that the assignment of lands should throughout the whole kingdom be finished and completed within three years, under severe penalties, and a monthly fine till the conclusion, would have an admirable effect.

A very little thought will convince us, that tythes are really a very great burthen to agriculture; they are precisely of
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the same nature with those in some foreign countries, that are found to be excessively oppressive; *viz.* they are multipliable on crops and live stock; forming a tax on *improvements* *. The great argument in favour of the present unequal land-tax, is the benefit which results from its being *fixed*; were it changeable with the rents, how few would undertake expensive improvements! If a farm is advanced now from *one* to *five* hundred pounds a year, the benefit of the improvement, in freedom from taxes, is all the improver's; which gives a wonderful energy to such undertakings. But tythes have a direct contrary effect, being *very* frequently the cause of *bad* land *continuing* such.

The tenth of the *produce* is a very considerable tax; for after a farmer has richly manured a field, drained it at a very large expence, given it a year's fallow, sowed it with wheat, harvested the crop, and paid two years rent for it, to pay a tenth of the product of all his expences and labour is so exceedingly burthensome, that no

* See the *Essays on Husbandry*, Essay i. p. 160.

tax subsisting at present in *England* nearly equals it *.

The common answer to such remarks as these, that the burthen lies on the landlord, and not the tenant, the rents of farms being in proportion, is a good one in *particular* instances, but not in *general*; and the exceptions to this rule, are the strongest proofs of the pernicious influence of tythes.

It is at the option of the clergyman, *when* and of *whom* he will receive his tythes *in kind*; and the practice (too commonly followed for the good of agriculture) is to gather it only of those farmers who have the purse and spirit to improve their lands. Those who cultivate their fields in an accurate and truly husband-like manner, feel the weight of this tax in its heaviest form; whereas the slovenly farmer, who acts in a direct contrary manner, is almost

* If the *rental* of *England* amounts to 20,000,000 *l.* the *product* of the lands cannot be less than 80,000,000 *l.* the tythe of which is 8,000,000 *l.* which wants but a *fifth* of equalling the sum total of *all the taxes* paid to the government by the subjects of *Great Britain*. 'Tis true, some deductions are to be made on account of *modus's* and parliamentary exemptions; but these are not considerable,

sure of an exemption, nearly on his own terms; for the difference of value of the tythes is prodigious, though taken both at so much in the pound. This circumstance therefore creates a constantly acting obstruction to improvements; for the farmer, who rented his lands on the expectation of compounding as well as his predecessor, finding that this vigorous cultivation is the signal for a heavy and irksome tax upon his diligence, rather gives up a prospect of profit, than submit to a burthen, which is laid on him *because he is industrious*.——It is by no means surprizing, that such a *cause* should be attended by a strong *effect*; it is really the case, for the improvements in husbandry, which are in this manner defeated, are extremely numerous. I have little doubt, but the abolition of tythes would benefit the agriculture of this kingdom some millions annually.

As to the equivalent, to be given the clergy, it is so apparently superior in *agreeableness*, ease, and dignity of character, so greatly conducing to an harmony between the pastor and his flock, that the very men-

tion of the contrast is sufficient. The benefit to them would be prodigious*.

III.

Frame new Poor Laws.

This is one of the most important points that can be attended to, in respect to Rural Oeconomy: But as I have been so particular in dwelling on it elsewhere, I shall give it nothing more than the mention here.

IV.

Convert the waste lands of the kingdom into arable farms.

It is surprizing that so much waste land should remain in a kingdom, where agriculture has received such great encouragements as in *England*. We have done much, but much remains to do. In my first letter I remarked, that 15,000,000

* For a further explanation of the oppressive nature of tythes, exemplified in an examination of M. de Vauban's famous scheme; see *Sir James Stewart's Political Inquiry*, Vol. 2. p. 568. and *Advantages & Disadvantages*, p. 22.

of acres out of the 34,000,000 which *England* contains, might be set aside as uncultivated commons and unimproved woods. Accuracy cannot be expected in such calculations, but we may venture surely to assert, that there are 5,000,000 of waste acres in this kingdom, that might be converted into arable farms, with little trouble besides ploughing up the surface. In a country where there are such numbers of uncultivated heaths and downs, it is a childish absurdity to complain, in a public manner, of a want of plenty of provisions. Let the legislature take the proper methods to bring into culture 5,000,000 of waste acres; and such an increase of tillage will yield us another million of inhabitants, *at the same time* that it increases our exportation of corn: I add this circumstance, because if the number of our people became twice as great as it is, the exportation should be encouraged; for unless we raise *more* corn than is eat at home, we may be certain we shall not raise *so much*.

Five millions of acres broke up, and converted into a regular course of husbandry,

dry, might be brought to yield as follows:

First year turnips.

Second, barley, 3 qrs. <i>per</i> acre.	£
15,000,000 of quarters, at	
18 s. <i>per</i> qr. - -	13,500,000

Third and fourth clover.

Fifth wheat, 2 qrs. <i>per</i> acre,	
10,000,000 of quarters, at	
38 s. <i>per</i> qr. - -	19,000,000
	32,500,000

Product of the corn alone in	£
<i>five</i> years, - -	32,500,000
In <i>ten</i> years, - -	65,000,000
In <i>twenty</i> years, - -	130,000,000

The product of the chaff and straw of these crops, and the clover and turnips, would nearly pay the expences upon them; but without expecting *such* a return, less considerable profits would render the execution of such a scheme of infinite consequence to the kingdom in general.

Nor would such a plan, if coolly considered, be found at all impracticable, since any

any tract of waste land may be inclosed with ditches, the banks planted with white thorn, and secured by a dead hedge at top, in fields of a proper size for farms of 500 acres each, farm-houses, with the proper stables, cow-houses, barns, &c. for every 500 acres built; and the whole surface covered with marle or clay, at the rate of 100 loads *per* acre, 40 bushels each; all these improvements may be made in any part of the kingdom I am acquainted with, (and I know none but dear ones) for the sum of *four pounds ten shillings per* acre. Five millions of acres, at that rate, would cost 21,250,000 *l.* or, in other words, be effected for one half of the money it cost this kingdom last war, to bury twenty thousand of her stoutest fellows in the ditches of *Germany*. However, to draw no such melancholy comparisons, where is the impracticability of raising *one* million a year, and effecting so glorious a work in a little more than twenty years! What a variety of *employment*, of the most valuable kind, would ensue on beginning the work; it is employment alone which *beneficially* promotes population in a trading country. Think of the vast chain of

exceedingly advantageous consequences which would result from such an undertaking! I cannot persuade myself to think that such a scheme can be neglected for ever. *But where is the money to come from?* —Borrow it. In the name of wonder, are we to run in debt for all the world but ourselves! Let us have *something* substantial, for at least a little wing of that airy fabric, which our enchanters have raised by the twirl of their political wands.

The only possible means of paying off our debt, of one hundred and forty millions, is to increase it to TWO HUNDRED MILLIONS. Nothing is clearer to me than this position.

But to return——

It is certainly remarked, that if the marling or claying is omitted, the difference in the expence is great; or if less than 100 loads were spread; and that quantity would be too great for many soils. The sum which I have allowed, is sufficient to form very desirable farms; and were no return to be made immediately to the national *revenue*, the reality and extent of the benefit would be too great to bear the least doubt. But there is no want
of

of such allowance; for if we calculate the value of the waste lands, at 4 s. an acre in their uncultivated state, were they improved as above-mentioned, no one can doubt of the advance being 6 s. such farms would very readily let for 10 s. *per* acre free of tythe.

	£
The rise of 6 s. on 5,000,000	
of acres, is - -	1,875,000
Deduct 15 l. <i>per</i> farm for re-	
pairs, - -	150,000
	£ 1,725,000

Deduct the interest of	
21,250,000 at 4 <i>per cent.</i>	850,000
	£ 875,000

Remains clear profit, which is sufficient to pay the interest of another twenty millions, to be expended on similar undertakings.

I have reckoned the waste lands to be let at 4 s. *per* acre; but it is well known that many of the royal forests, chases, &c.
do

do not produce as many pence, which circumstance is sufficient to extend the latitude of the calculation.

I have supposed the farms to be so large as 500 acres, that the improvement might be effected with less expence; but it would be an admirable encourager of population, if *some* waste lands were converted into small farms, completely *stocked*, and then lett to labourers who could produce a decent character, and prove their having 7, 8, or 10 children, or more alive; settling them in such farms, taking no rent the first year, and afterwards no more than if the soil was divided into large farms. If such a plan was adopted, the expence would be found to amount as follows.

Farms of 60 acres, each a house, and necessary offices, inclosed in fields of ten acres each, and completely stocked with all the necessary implements, furniture and live stock, two ploughs, and two yoke of oxen, the soil all marled or clayed; 100 loads *per* acre, would cost in the whole, 8 l. 14 s. *per* acre.

Ditto marled with only 50 loads, or half the farm at 100, 7 l. 4 s. *per* acre.

Ditto,

Ditto, not marled at all, 5 *l.* 14 *s.*

A slight calculation would show the amount of the expence on any given number of acres: thus far, however, I shall assert that 1,000,000 of acres, half marled, would provide for 16666 families, cost 7,200,000 *l.* and after the first year yield in rent (reckoning the rise 6 *s.* which on *one* million acres is not much, as we need not suppose them lett now at 4 *s.*) five *per cent.* interest on that sum.

I am sensible of the strong prejudices, which lie against all such calculations, plans, and schemes as this. I know how readily people are apt to laugh at all *projects* for the public good: But that is no reason against any one's bestowing a little time, in endeavouring to be of some service to his countrymen. Because no such noble undertakings have hitherto been executed, is that an unanswerable proof, that all are impracticable? I have given but a slight sketch of what might be done; a minute inquiry into all the particulars of it, would prove it not only possible, but expedient. To dwell upon the increase of population, from such a work,

is

is needless, being sufficiently evident upon the bare mention of it.

Extend the idea to all the improveable wastes of the THREE KINGDOMS;——What a truly glorious undertaking! Happy the monarch whose reign is adorned by such an event.—Yield in fame, ye *Edwards* and ye *Henrys*—acknowledge the infinite difference between *conquest abroad*, and *improvement at home*!

V.

Finish the enlargement of the capital; and lessen the number of its inhabitants, by such secondary means as may be judged most proper.

That the over-grown size of *London* is pernicious to the population of the kingdom, there can be no doubt. There can be no stronger proof of this, than the proportion between the births and burials. The difference between great cities and the country, is calculated by the ingenious *M. Bertrand*, at 43 to 25 *, and the wonder

* *Mémoires de la Berne Société*, 1765. 2d part. p. 81.

is, that it is not greater; in *London* it most indubitably is owing to the excessive numbers of people crowded into a small compass, and the quantity of sea-coal consumed — we cannot be surprized at the loss of people in that great city, if we consider the following facts in only one instance, that of *infants*, which I have extracted from Mr. *Hanway*:

“ Infants die at the rate of only fourteen or sixteen in the hundred, in villages, fifty, a hundred, or two hundred miles from *London*; but there they die sixty or seventy in a hundred.

Permit me to ask, would not any man in his senses conclude, after the death of three or four children, in one woman's hands, that the nurse was very unfortunate; and after five or six, that she was very ignorant, or very wicked? But when in so short a period the mortality of seven or eight had happened, would it not create a suspicion that she starved them, or gave them *sleeping-potions*? And would not the same common sense and candour lead one to think, that upon seeing the
eighteenth

eighteenth child brought within this parish-nurse's den, that those who sent them, preferred that they should die?

The parish-officer alluded to (in another tract, written by Mr. *Hanway*) it seems, is a shrewd, sensible man; but by the mere force of custom, and the habit of burying children, becoming as callous as a flint, upon being solicited on the behalf of a young woman, to allow her two shillings and six-pence a week, for some time, in order to support her child; it being alledged that this is the common price of a parish-nurse; he answered, "Yes, that is very true; but then after a month or six weeks, we heard no more of the child, whereas your young woman will probably preserve hers."

Hath it not also been declared, in open court in *Guildhall*, by the master of a work-house, of a very considerable parish, that not a single child was reared in his parish in fourteen years?

And what think you of a case, wherein a bond of 30 *l.* given under condition to find a child 3 *s.* a week in the mother's hands, was compounded for 1 *l.* 5 *s.* with a view

view to bring the child to the work-house?"

If these facts are true, which is indubitable, can we wonder that upon the whole number in the bills, 24 die to 16 that are born?

The loss of the human species in that destructive city, will appear from the following table :

Burials within the bills of mortality, for 150 years past, exclusive of 200,000 by the plague, - -	2,631,137
The christenings only -	1,806,769
Consequently the diminution of subjects, by waste in these cities, is -	824,368
Including the plague, -	1,024,368
This, upon a medium, is annually, - -	6,829
The number, upon a medium of the three years, 1763, 1764, 1765, -	8,089
In 150 years longer, the loss will be - -	1,213,350*

* *Hanway's Letters*, Vol. 2. p. 131.

Even in the last 80 years,
the loss is upwards of - 619,000†

That the plague ought to be reckoned in the loss, no one can dispute, since its rage was certainly owing to the number of people crowded into a close unwholesome spot‡.

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† *Three Tracts*, p. 206.

‡ C'est une expérience éternelle que dans les grandes Villes, le genre de vie ordinaire abrège beaucoup la vie des hommes en général. On y renverse l'ordre des saisons, la nature y est toujours prise au rebours ; les hommes y ont besoin de deux natures ; d'abord de celle qui leur est commune avec tout le genre humain ; & ensuite, d'une autre qui leur forme un second tempérament, pour résister à un certain système de vie qui n'est pas naturel. Règle générale : dans tous les Royaumes où il se trouve plusieurs capitales extrêmement peuplées, le reste de l'état manque toujours d'habitans, parce que la population de ces grandes Villes ne se soutient que par le recrutement continuel des provinces, qui s'épuisent à la fin d'hommes pour elles. *Intérêts de la France mal Entendus, tome 1. p. 331.*

Cette population des grandes Villes, toujours formée aux dépens de celle de la campagne occasionne un vuide dans l'agriculture, qui est mal réparé par l'augmentation de quelques arts. L'influence de ceux-ci ne s'étend point assez au loin. Le corps général de la Monarchie ne s'en ressent pas assez. *Ib. p. 40.*

Enfin, qu'ainsi que la misère, l'excès des richesses, le luxe & la mollesse des villes sont devenues contraires à la fécondité comme au nombre des mariages. *Les Avant, & Desavant, p. 322.*

Great

The *loss* of 8000 annually, instead of the *gain* of 168,000, which would be in proportion to the many villages in the country (24 in 100) is amazing, and when considered in conjunction with the loss by war, &c. &c. is sufficient to explain, from whence comes our loss of one million and half of people within a century; the calculation of modern politicians. But suppose only 10 in 100, the gain in the country, the loss by *London* is near 80,000 annually——and if 5 in 100 is taken, yet it amounts to near 40,000, which is prodigious; and a powerfully pleading argument, for stopping at least all further addition to so pernicious a city.

I have heard great complaints of the dearness of living at *London*: it is a national misfortune, that it is not ten times

Great cities, says *Montesquieu*, are destructive to society, beget vice and disorder of all kinds, starve the remoter provinces, and even starve themselves. *L'Esprit des Loix*.

I should not have given these authorities, for what was already proved, with respect to *London*, in the text, did they not shew that foreigners are struck with the same ideas, from viewing the effects of *Paris*, a city which contains 2 or 300,000 souls less than *London*.

dearer. To find fault with good roads, or any such public conveniences, in this age, would have the appearance of paradox and absurdity; but it is nevertheless a fact, that giving the power of expeditious travelling, depopulates the kingdom.

Young men and women in the country villages, fix their eye on *London*, as the last stage of their hope; they enter into service in the country for little else but to raise money enough to go to *London*, which was no such easy matter, when a stage-coach was four or five days creeping an hundred miles; the fare and the expences ran high. *But now* a country fellow, one hundred miles from *London*, jumps on to a coach-box in the morning, and for eight or ten shillings gets to town by night; which makes a material difference; besides rendering the going up and down so easy, that the numbers *who have seen London* are increased ten fold, and of course ten times the boasts are founded in the ears of country fools, to induce them to quit their healthy clean fields, for a region of dirt, stink, and noise. And the number of young women that fly thither is

is almost incredible. Some gueſs, however, may be given, from the ten thouſand which are ſaid every year to be there debauched.

But is all this, ſay ſome, a reaſon for having bad roads? By no means: good roads are excellent conveniences; all I would prove is, that as the means of increaſing the inhabitants of *London* multiply—— ſome ſpirited meaſures ſhould be exerted in oppoſition to them. Thus much however I will venture; I had much rather ſee a *croſs* road converted into a turnpike, than one that leads to *London*.

Good however as the latter became, there was yet another circumſtance, which bid fair for keeping the over-grown city within bounds: The *ſmall-pox* hung in *terrorem*, and frightened millions at the idea of *London*. What a change in this article too! In a year or two there will not be a lout in the country, that has not been inoculated; from which moment all bars are removed, and whip he flies to make his fortune at *London*. I know, in the extent of no great number of pariſhes, near an hundred inſtances of this.

The influence of inoculation, in this respect, I know to be pernicious; but who from thence would argue against so excellent a practice in general: Nothing is further from my thoughts; but I must at the same time be allowed to remark, that it is a strong additional reason for throwing obstructions upon the increase of *London*. If every thing tends to add thousands yearly to that city's inhabitants, at a time when the pernicious effects of her present numbers are so well known, surely it greatly behoves the legislature to consider of some means, of not only preventing all future increase, but of reducing the present populousness of it. Direct prohibitions, in such cases as these, are contrary to natural, as well as artificial liberty, and ought never to be framed; but the whole system, of even *British* liberty, allows the restrictions which operate thro' taxes. To tell a man that he shall not live in *London*, is violating the nature of our liberty; but to make him pay heavily for living there, is totally consonant to our ideas. Instead of encouraging schemes for supplying *London* with provisions cheap, render them dearer. Let the window.

slow tax be doubled or trebled, and with *no* exceptions. Lay a tax upon all servants kept at *London*. In short, form such a system of expence upon all that live there, of the lower sort of people, as to put a stop to the numbers that daily flock thither, and even drive out many that are already settled there.—I am not insensible to the objections that such a plan is open to: All I have to say, is this; draw a comparison between the present evils resulting from the size of the capital, and the prejudices which arise against local taxes, which of these should give way? Which are most important, the interest of some of the inhabitants of *London*, or those of the whole nation?

But contrary to all this reasoning, a late author, who has wrote two large quarto volumes, seemingly in defence of all modern politics, (in them, *whatever is, is right*) attempts to persuade his readers, that large cities are beneficial, instead of being disadvantageous: He says,—“ The principal objections to great cities, are, ‘ that
‘ health there is not so good, that marriages
‘ are not so frequent as in the country, that

‘ debauchery prevails, and that abuses are multiplied.’ To this I answer, that these objections lie equally against all cities, and not peculiar to those complained of for their bulk ; and that the evil proceeds more from the spirit of the inhabitants, than from the size of the capital. As for the prolongation of life, it is more a private than a public concern. It is farther urged, that the number of deaths exceed the number of births in great cities ; consequently smaller towns, and even the country is stripped of its inhabitants, in order to recruit these capitals.—Here I deny, first, that in all capitals the number of deaths exceed the number of births ; for in *Paris* it is otherwise. But supposing the assertion to be true, what conclusion can be drawn from it, except that many people who are born in the country die in town. That the country should furnish cities with inhabitants is no evil. What occasion has the country with supernumerary hands * ?”

* *Inquiry into Political Oeconomy*, Vol. I. p. 53.

This

This passage contains a very curious piece of reasoning: Let us examine it. *The objections, on account of health, marriages*, debauchery, and abuses, lie equally against all cities.* This is diametrically contrary to fact; but reason alone is sufficient to refute it. Can any one imagine that *health* stands as good a chance in the midst of the stinking effluvia of near a million of carcasses—without reckoning the attendant cattle and live animals—breathing the sea-coal smoak from the chimneys of above 105,000 houses? and existing five miles from *country air*? Are not these circumstances, I say, more unfavourable to health, than the same acting in a city, which contain but 1 or 200,000 souls! Will not every one of these evils lessen in proportion to the smaller number of inhabitants? The *neglect of marriage—debauchery, and abuses*, are the consequences

* Mr. Hanway inserts in his *Letters*, the christenings, marriages, and burials in two market-towns; by which it appears, that the christenings exceed the burials 21 per cent. instead of falling short 30, as at *London*. Likewise 700 inhabitants produced 10 marriages annually; *London* (with 700,000 souls) should, to be equal, produce 10,000, instead of which, she has only 2350. What a contrast!

of

of excessive luxury : Is a city of two hundred thousand inhabitants, ever found as luxurious as one of a million ? It is the prodigious confluence of wealth that causes luxury ; with this addition, that wherever there are *most* men, *most* villany will necessarily abound. So far are all cities from being in these respects alike, that few, if any, can equal *London* ; for it is not only the seat of government, the court, and the exchequer, but the greatest trading emporium in the whole world ; so that causes that do not often join, unite there, and must be attended with proportionable effects. But the author asserts, that *these evils proceed more from the spirit of the inhabitants, than the size of their city*, which is a strange absurdity and confusion of terms ; because the spirit of the inhabitants *proceeds* from the size of the city ; *ergo*, the *evils* proceed from the size of it. Who can be so weak as to imagine that the luxurious debaucheries of *London*, are vices innate in the minds of the inhabitants ; and not owing to the influx of riches, and the influence of example ! Why do not common prostitutes bedeck themselves and walk forth for their prey in country

towns? Is it because the minds of their inhabitants are virtuous? It is ridiculous to suppose that half a million of people can crowd together in one spot, and not give rise to fifty times the vice that is to be found in ten cities, of fifty thousand each. It is astonishing, that a man of any penetration could fall into such strange absurdities. He further says, *That the prolongation of life is a private, not a public concern.* These, it must be confessed, are admirable politics! I must refer the reader to the preceding pages, where he will find, that infants in the country die 14 in 100; in *London*, 70 in 100: However, this, according to Sir *James*, is a private affair; the prolongation of their lives is certainly no public concern. Farther, *The country's losing her inhabitants is no evil: What occasion has she for supernumerary hands?* If the reader turns to the Political Inquiry, he will find many such strokes as these. All sorts of subjects are reduced to combinations and principles; and by strange political legerdemain, are jumbled about and squared into *maxims*, and then once gained, are applied to every thing; thus agriculture is found to receive no benefit from

from *supernumerary* hands—Cities drain the country of numbers;—but this is no evil, because the country wants not *supernumerary* hands.—Such chains of reasoning will not stand the test of examination. Because there are such hands as *supernumeraries*, it is at once concluded, that the city *purges* it (an expression of our author's) of no others. But let me ask this writer, whether hale youths of eighteen and twenty, who have been brought up to the plough, are *supernumeraries*? Whether the country wants to be *purged* of others; who are introduced to *one* country service, only to rub off their rusticity, and fit them for the capital? What country is sick of producing hale wenches, that make good dairy women, and farming servants? That the country has *supernumeraries*, I agree; but none of them go to *London*, in hopes of being waiters at bawdy-houses and taverns; or the girls, kept-mistresses and street-walkers. The country is *purged* indeed; but precisely of that aliment she would wish to keep and digest. If a great city is an evil, the increasing it is the same; but the increasing it, by robbing the country of its most valuable hands—until pro-
per

per ones are scarcely to be found for cultivation, (the case in many parts of *England*) is so far from being a benefit, that it is a most pernicious evil.

Before I conclude this sketch of the consequences of the capital, I shall mention another circumstance, which has an *immediate* affect upon agriculture; and that is the loss of manure. A slight calculation will give us some idea of this.

London annually consumes
21,600,000 bushels of coals;
now a bushel I have found,
by experiment, yields a peck
of ashes, that is 5,400,000
bushels; which, at $1\frac{1}{2}d.$ per
bushel, is - -

£.
33,750

There are 105,000 houses in
that city, which certainly
make, upon an average, and
exclusive of coal ashes, four
load of manure annually,
each of 40 bushels: It is to
be remembered, that a vast
number of tradesmen make
twenty times that quantity;

for

for instance, bakers wood-
ashes, starch-makers, dis-
tillers, brewers, sugar-ba-
kers, &c. &c. &c. this
amounts to 420,000 loads,
which, at 2 s. 6 d. is -

£
52,500

The author of the *Three Tracts*,
reckons the horses kept in
London, at 20,000; which
certainly make each 20 load
of dung *, or 400,000
loads, which at 2 s. is -

40,000

There are killed annually at
London 41,000 *bacon* hogs;
35,000 of these, must at
least be fatted there: I rec-
ken two loads of dung to
each, which cannot be over
the truth, as they are there
so long in fatting; 70,000
load, at 4 s. (it is much
better than that of any other
cattle) is - -

14,000

One hundred and forty-six
thousand, nine hundred and
thirty pork hogs, of which

* In the country, where they are kept only the winter
half year in the stable, they make 10 or 12.

I reckon 80,000 fatted at
London, and two-thirds as
 many loads of dung, or
 53,000, at 4 s. - -

£
 10,600

There is no finer manure than
 the rubbish mortar of old
 houses when pulled down;
 that and the manure from
 fires, and the rubbish of the
 brick-kilns; cow-yards, the
 riddance of privies, and nu-
 merous other articles, not
 contained under the fore-
 going heads, 200,000 loads,
 at 3 s. - - -

30,000

£ 180,850

Add the profit upon this quan-
 tity, which cannot be esti-
 mated at less than double
 the amount; if it was not
 that, it would never answer
 to manure at all, - -

361,700

Total loss by this article *p. ann.* £ 542,550

As to the quantity really used by the
 farmers, it is very inconsiderable, com-
 pared

pared to the whole quantity, and I have reason to think, does not exceed what is lost in the purlieus of *London*, not reckoned in the above account; and the quantity in that city is considerably more than minuted, for numerous articles are not included: the fullage of the streets I take no notice of, because it may be said to be owing to *London* being what it is; and yet if the 700,000 people were divided into towns of 10,000 each, there would be much fullage, and none lost. This slight sketch, though it cannot boast minute accuracy, yet is sufficient to prove at least, that a very considerable loss is yearly sustained by agriculture, in the quantity of useless manure made at *London*.

VI.

Reduce greatly the prices of the necessaries of life, and those of labour in proportion.

To effect these, in a manner agreeable to the constitution and liberty of *Great Britain*, would be of infinite consequence to agriculture and manufactures. I have already attempted to explain the reasons why the first would do mischief without the second:

nor

nor do I see any thing impracticable in keeping a considerable ballance between labour and provisions. Our laws at present allow the justices in sessions to rate the price of labour. An explicit act of parliament should fix the proportion between them, naming every degree: for instance, take of wheat household bread—rye ditto—rice—potatoes—cheese—mutton—beef—veal—pork—malt *—candles—and soap, of each one pound; cast up the prices, and take the average, and then ordain that when such an average is so and so, the price of a day's labour of twelve hours shall be so and so, one hour and a half to be allowed for breakfast and dinner: And the proportion between the price of *piece-work* and a day's labour being found, ordain the same proportion between provisions and that. I only mention this scale as one way of determining a proportion.

As to the means of reducing the prices of provisions, by increasing their quantity, I apprehend the following would be effectual.

* The mean price of malt being found, a very little trouble would at any time tell the price of a pound.

I. Lay a very heavy tax upon *all* horses; and with a part of its produce give for three years a small bounty upon working-oxen.

Rather than so exceedingly a beneficial law should be lost, *through causes not proper to be mentioned*, let *race and coach-horses* be exempted.

One million sterling a year *might* be raised on horses, with greater ease in the collection, and equally in the taxation, than most of our taxes can boast.

II. Take off the duties upon the following articles, *salt—candles—soap—leather—coals*, except at *London*—and *beer*; all these taxes raise but 540,000*l.* and one upon horses, would greatly *more* than pay it, and yield a bounty upon oxen*.

III. Take off the duties upon tea, and subject the houses in which tea is drank to a limited excise.

This tax should be absolutely aimed at the poor: It might easily be framed so as not to give greater offence to the liberty of the subject, than many others already in

* The author of the *Present State*, p. 98, 99. has sketched this matter more fully.

being. But unless tea-drinking is put an end to among the poor, no great and beneficial plenty of necessaries can ensue.

IV. Give a bounty of 5 *l.* per acre on all potatoes that are succeeded by wheat.

V. Lay for five years a duty of 20 *s.* on every calf killed, (all to be considered as such, till two years old) or roasting pig exposed in market; the last to be levied by the clerks of the markets, the first by the excise-officers.

These five articles would infallibly effect the wished for end; and exceedingly promote the population, agriculture, manufactures, and trade of *Britain*.

VII.

Unite Ireland to Great Britain.

A subject pregnant with important consequence! the full discussion of which would require a volume. Well might the author of *The Essays on Husbandry* declare, that were this union to take place, the *vis inertia* of the *British* empire would be equal, if not superior to any one power in the world*.

* *Essay* 1. p. 61.

I could extend these hints for improvements much further; but too many accumulated particulars are apt to confound ideas, and give an appearance of impracticability of execution; besides, those I have already named, would, I humbly apprehend, be attended with such effects, that smaller matters would be found of little comparative consequence——

Sir *M. Decker*, it is true, has pointed out with great clearness the effects of taxes in raising the price of all the necessaries of life: nor can there be any doubt but that the immense riches of this country, and the infinity of taxes raised in it, must have such effects; but these are causes which I have purposely omitted to mention (though the most powerful) because all propositions of amendment would be idle and absurd, even in the idea; but as strong an effect as *they* are attended with, yet other points that are possible to be remedied, are of vast consequence, and as such I have considered them.

S Y L V Æ:

O R,

OCCASIONAL TRACTS

O N

H U S B A N D R Y

A N D

RURAL OECONOMICS.

Diù multùmque dubitavi, an HOS LIBELLOS, qui mihi subito calore, & quadam fastinandi voluptate fluxerant (cum singuli de sinu meo prodissent) congregatos ipse dimitterem. Sed et CULICEM legimus, & BATRACHOMYOMACHIAM etiam agnoscimus.

STATII *Sylv.* in *Praefat.*

Comparative Profit of Pasture and Arable Land.

THE following calculation of the different profit attending *arable* and *pasture-land*, is not drawn up merely from fancy, but from accounts I have kept of my own crops, and the information I have gained from several sensible farmers.

I take twenty acres, and suppose them an addition to a farm; but I should premise, such an one as will require some additional cattle to be kept for it, perhaps two horses: but a farm of fifty pounds *per annum* may be so circumstanced as to require no material standing extraordinary expences for such an addition, in which case the ploughings, &c. will not cost near what I have estimated them at; but the fairest way is the supposition I have made. We reckon nothing is either gotten or lost by four shillings *per acre* for a clean earth.

Calculation

Calculation of the expences and profit of farming a ploughed or pasture-field of twenty acres for nine years, on a supposition that it is not a farm by itself, but an addition to another of fifty pounds per annum, the soil wet and loose, a woodcock, brick-earth on the surface, for eighteen inches deep, and under that a very good stiff clay. The field improved by land-draining.*

First Year, Fallow.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent and charges, - - -	15	0	0
First ploughing, a clean earth, -	4	0	0
Second ditto, ribbling it close across †, -	4	0	0
Harrowing it across, - - -	0	5	0
Rolling, - - -	0	3	0
Third earth, an half ploughing, -	2	10	0
Fourth, a clean earth, - - -	4	0	0
	29	18	0
	Second		

* Loose, damp, hollow ground; it is difficult to give an accurate description of any soil, few having the exquisite talents at description, which is so remarkable in a late volume of poems, entitled *The Amaranth*; wherein it is difficult to say which is most conspicuous; the excellence of the *sentiments*, or the elegance of their *dress*. As to the reason of my quoting it here, take the following description of a good soil: It is not only truly poetic, but admirably just:

A a 4

The

† This is raising it into half ridges alternately high and low.

Second Year, Barley.				<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c.	-	-	-	15	0	0
First ploughing, a clean earth,	-	-	-	4	0	0
Harrowing down the ridges,	-	-	-	9	5	0
Expences of manuring, at twenty loads per acre, and spreading the manure, supposed to be at the farmer's house,				10	0	0
Second ploughing, the sowing earth, as it may be done with a double-breasted plough, to shut up the small ridges, called in Suffolk barks, that and the harrowing,	-	-	-	4	0	0
Eight quarters six bushels of seed-barley, at seventeen shillings per quarter,	-	-	-	7	8	9
Two bushels and a half of clover-feed, at twenty-five shillings per bushel,	-	-	-	3	2	6
Harrowing and water-furrowing,	-	-	-	0	10	0
Weeding,	-	-	-	1	0	0
Harvesting, two shillings and six-pence per acre,	-	-	-	2	10	0
Carry over,				47	16	3

The well-turn'd foil with auburn brightness shone,
Mellow'd with nitrous air and genial fun:
An harmony of mold, by nature mixt!
Not light as air, nor as a cement fix'd:
Just firm enough t'embrace the thriving root,
Yet give free expanse to the fibrous shoot;
Dilating, when disturb'd by lab'ring hands,
And smelling sweet when show'rs refresh the lands.

Christ's Parable of the Sower, p. 8.

If the reader turns to the *Georgics* of *Virgil*; the writers *De Re Rustica*, particularly *Varro*; and the *Greek Geoponic* authors, he will find that no circumstance in the description of well-conditioned soil is omitted in the above few lines; and *modern* experience in this instance has given the stamp of truth to the writings of the *antients*.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	47	16	3
Threshing eighty quarters, at one shilling per quarter, - - -	4	0	0
Carrying out eighty quarters, at eight times, eight pounds; but as back carriage may sometimes be got, say -	5	0	0
Expences eight times at market, - -	1	10	0
	58	6	3

Third Year, Clover.

Rent, &c. - - -	15	0	0
Cutting twenty acres, and harvesting it, -	3	0	0
Threshing thirty two bushels of clover-feed, at four shillings per bushel, -	6	8	0
Expences of carrying the feed out, and at market, - - -	1	15	0
Weeding the clover, - - -	0	10	0
	26	13	0

Fourth Year, Wheat.

Rent, &c. - - -	15	0	0
Ploughing, harrowing, and water-furrowing the clover-land, and sowing the wheat, five shillings and six-pence per acre, - - -	5	10	0
Five quarters of seed, - - -	8	0	0
Weeding, - - -	1	10	0
Harvesting, including all expences, five shillings per acre, - - -	5	0	0
Threshing fifty quarters, - - -	5	0	0
Carrying out ditto, at five goings, back carriage three of them, and at market, -	3	0	0
Haulming, at one shilling six-pence, -	1	10	0
	44	10	0

Fifth Year, Fallow:

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c.	15	0	0
Expences the same as the first year,	14	18	0
	29	18	0

Sixth Year, Wheat.

Rent, &c.	15	0	0
Manuring, the materials supposed to be in the farmer's yard,	10	0	0
Five quarters of feed blew-chaff wheat,	7	0	0
Sowing earth,	4	0	0
Weeding,	2	0	0
Harvesting,	5	0	0
Threshing sixty quarters, at two shillings and four-pence per quarter,	7	0	0
Carrying out ditto, at six times, as before,	5	0	0
	55	0	0

Seventh Year, White Oats.

Rent, &c.	15	0	0
First ploughing, a clean earth,	4	0	0
Water-furrowing,	0	5	0
Second ploughing, a clean earth,	4	0	0
Water-furrowing,	0	3	0
Third ploughing, sowing earth, and harrowing,	5	0	0
Ten quarters of feed,	8	0	0
Weeding,	0	10	0
Harvesting, two shillings and six-pence per acre,	2	10	0
Threshing sixty quarters,	3	0	0
Carrying out six times and marketing,	3	18	0
	46	6	0

Elghth Year, Tares and Turnips.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c. - - -	15	0	0
One clean earth, and harrowing ten acres for tares, and water furrowing, and rolling, - - -	2	10	0
Two quarters and half of seed-tares, -	2	10	0
Cutting, making, loading, and stacking of fifteen loads of tare fodder, -	2	0	0
Ploughing up the tare-land, a clean earth, - - -	2	0	0
Ditto across, another clean earth, -	2	0	0
Half ploughing it, - - -	1	5	0
First ploughing for turnips, ten acres, a clean earth, - - -	2	0	0
Second ploughing, drawing the ridges into barks, - - -	1	0	0
Third ploughing, ribbling it across, -	1	10	0
Harrowing it flat, - - -	0	2	6
Fourth ploughing, a clean earth; draw it on to the fleach, - - -	2	0	0
Fifth ploughing, sowing earth, arch it up, and harrowing, - - -	2	5	0
Turnip-feed, - - -	0	5	0
First hoeing, at four shillings per acre,	2	0	0
Second ditto, at two shillings and six- pence, - - -	1	5	0
	39	12	6

Ninth Year, Wheat and Barley.

Rent, &c. - - -	15	0	0
Ploughing and sowing the tare-land with wheat, water-furrowing, &c. -	2	10	0
Carry over	17	10	0

				<i>l.</i>	<i>s.</i>	<i>d.</i>
			Brought over	17	10	0
Two quarters and an half of feed red-stalked wheat,	-	-	-	4	0	0
Weeding,	-	-	-	0	15	0
Harvesting,	-	-	-	2	10	0
Haulming,	-	-	-	0	15	0
Threshing thirty quarters,	-	-	-	3	0	0
Carrying out ditto, &c.	-	-	-	2	10	0
Ploughing and sowing the turnip-land with barley, harrowing, rolling, and water-furrowing,	-	-	-	2	10	0
Four quarters of seed-barley,	-	-	-	3	4	0
Weeding,	-	-	-	0	2	6
Harvesting,	-	-	-	1	5	9
Threshing thirty-five quarters,	-	-	-	1	15	0
Carrying out thirty-five quarters,	-	-	-	1	10	0
				41	6	6

P R O D U C E.

First Year.

Sheep-feed worth,	-	-	-	1	10	0
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Second Year.

Eighty quarters of barley, at sixteen shillings per quarter,	-	-	-	64	0	0
Feed for cattle,	-	-	-	2	0	0
				66	0	0

Third Year.

Feed of clover before it is feeded,	-	-	-	20	0	0
Thirty-two bushels of clover-feed, at one pound five shillings per bushel,	-	-	-	40	0	0
Feed after feed,	-	-	-	2	0	0
				62	0	0

Fourth Year.

l. s. d.

Fifty quarters of wheat, at thirty shillings

per quarter, - - -

75 0 0

Feed for cattle, - - -

1 10 0

76 10 0

Fifth Year.

Sheep-feed, - - -

1 10 0

Sixth Year.

Sixty quarters of wheat, at twenty eight

shillings per quarter, - -

84 0 0

Feed for cattle, - - -

1 10 0

85 10 0

Seventh Year.

Sixty quarters of white oats, at sixteen

shillings per quarter, - -

48 0 0

Feed for cattle, - - -

2 0 0

50 0 0

Eighth Year.

Fifteen loads of tares, - -

15 0 0

Ten acres of turnips to buy cattle in, and
fatten on them, to sell off in the spring,

worth three pounds per acre, -

30 0 0

45 0 0

Ninth Year.

Thirty quarters of wheat, at twenty-

nine shillings per quarter, - -

43 10 0

Carry over 43 10 0

				l.	s.	d.
			Brought over	43	10	0
Feed,	-	-	-	0	15	0
Thirty-five quarters of barley, at fifteen						
shillings per quarter,	-	-	-	26	5	0
Feed,	-	-	-	1	0	0
				<u>71</u>	<u>10</u>	<u>0</u>
			First Year, Fallow.			
Expences,	-	-	-	29	18	0
Produce,	-	-	-	1	10	0
				<u>28</u>	<u>8</u>	<u>0</u>
Loss,	-	-	-			
			Second Year, Barley.			
Produce,	-	-	-	66	0	0
Expences,	-	-	-	58	6	3
				<u>7</u>	<u>13</u>	<u>9</u>
Profit,	-	-	-			
			Third Year, Clover.			
Produce,	-	-	-	62	0	0
Expences,	-	-	-	26	13	0
				<u>35</u>	<u>7</u>	<u>0</u>
Profit,	-	-	-			
			Fourth Year, Wheat.			
Produce,	-	-	-	76	10	0
Expences,	-	-	-	44	10	0
				<u>32</u>	<u>0</u>	<u>0</u>
Profit,	-	-	-			
			Fifth Year, Fallow.			
Expences,	-	-	-	29	18	0
Produce,	-	-	-	1	10	0
				<u>28</u>	<u>8</u>	<u>0</u>
Loss,	-	-	-			

Sixth Year, Wheat.

					<i>l.</i>	<i>s.</i>	<i>d.</i>
Produce,	-	-	-	-	85	10	0
Expences,	-	-	-	-	55	0	0
Profit,	-	-	-	-	30	10	0

Seventh Year, Oats.

Produce,	-	-	-	-	50	0	0
Expences,	-	-	-	-	46	6	0
Profit,	-	-	-	-	3	14	0

Eighth Year, Tares and Turnips.

Produce,	-	-	-	-	45	0	0
Expences,	-	-	-	-	39	12	6
Profit,	-	-	-	-	5	7	6

Ninth Year, Wheat and Barley.

Produce,	-	-	-	-	71	10	0
Expences,	-	-	-	-	41	6	6
Profit,	-	-	-	-	30	3	6

L O S S.

1st Year,	-	-	-	-	28	8	0
5th Year,	-	-	-	-	28	8	0
Loss of 2 Years,	-	-	-	-	56	16	0

P R O -

P R O F I T.

				l.	s.	d.
2d Year,	-	-	-	7	13	9
3d Year,	-	-	-	35	7	0
4th Year,	-	-	-	32	0	0
6th Year,	-	-	-	30	10	0
7th Year,	-	-	-	3	14	0
8th Year,	-	-	-	5	7	6
9th Year,	-	-	-	30	3	6
Profit of 7 Years,	-	-	-	144	15	9
Loss of two Years,	-	-	-	56	16	0
Total profit in 9 Years,	-	-	-	87	19	9

which is nine pounds fifteen shillings and six-pence per annum, or nine shillings and nine pence per acre*.

But I should observe, that as a crop of clover-seed is the most uncertain and various of any that is grown, I have reckoned less for it by far than multitudes produce, though, at the same time, many bring nothing at all.

I know a field of twenty acres, which I have been often told by several who knew the crop, once produced the farmer five bushels *per* acre. It was all down on a *Friday*, and the farmer suspecting a change of weather, by great rewards to his workmen, and bringing casks of ale into the

* Nothing is reckoned for the straw, as it is supposed to be made into the manure.

field,

field, and feeding them well, tempted them to work in an extraordinary manner all the *Saturday*, and cleared the whole into his barn. It began raining in the night, and so much succeeding bad weather came, that the crops were, in general, greatly damaged. His produced, as I said, one hundred bushels, all which he sold at three pounds ten shillings *per* bushel, arising to three hundred and fifty pounds. And a few years ago I saw the same field with a crop of clover, which did not produce twenty pecks, and that so wretched as to fetch nothing.

I read the above calculation to a farmer, and he observed that I would reckon eighty bushels for the crop; and as it is often grown, I will give another total, with that alteration, that the reader may adopt either, according to his idea of the chance.

B b

Profit

				<i>l.</i>	<i>s.</i>	<i>d.</i>
Profit as above,	-	-	-	144	15	9
				<i>l.</i>	<i>s.</i>	<i>d.</i>
Add 48 bushels,	-	-	60	0	0	
Threshing,	-	-	9	12	0	
				50	8	0
				195	3	9
Loss,	-	-	-	-	56	16
					138	7
						9

which is fifteen pounds seven shillings and six-pence per annum, or fifteen shillings and four pence per acre.

As I mention back-carriage in this calculation, I will explain my meaning. We generally carry our corn to the neighbouring sea-ports, and load home with coals for black-smiths, or any persons that want them, who pay us eighteen shillings for the carriage of a loading, twelve shillings *per* chaldron, and we generally bring one and a half. But as we may accidentally carry our corn where none is to be had, I make such allowances as to bring it near the truth.

Calcu-

*Calculation of nine Years Expences and Profit
of twenty Acres of Grass-Land, and Soil
supposed to be the same as the above Arable
Land.*

First Year's Expences.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c. - - - -	15	0	0
Mowing, making, and cocking ten acres of grafs into hay, at three shillings per acre, with beer, - - -	1	10	0
Stacking, loading, &c. of ten loads of hay	1	10	0
Expences on four goings of hay when it is fold, weighing, and market, - -	0	16	0
<i>N. B.</i> Nothing is reckoned for carriage, as manure is brought back.			
Fifteen old crones*, bought in August -	3	15	0
Expences in buying sheep, - - -	0	4	0
Three cows, at five pounds each, - -	15	0	0
A sow, and ten pigs, three weeks old, -	2	12	6
Supposing two acres to be manured each year with twenty-six loads per acre,			
Forty loads of clay, at two-pence half- penny per load, - - - -	0	8	4
Twelve ditto of ashes, mortar, or rotten dung, bought; six waggon loads, at eleven shillings and six-pence per load -	3	9	0
Expences of carrying it on, spreading, &c.	1	8	0
Turning and mixing manure, - - -	0	4	0
	45 16 10		

* Old female sheep.

Second Year.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c. - - - - -	15	0	0
Mowing, making, &c. of six acres of grafs,	0	18	0
Stacking, &c. six loads of hay, - -	0	18	0
Weighing, marketing, &c. - - -	0	10	0
Expences of buying sheep, - - -	0	1	6
A score of old crones, - - -	6	0	0
Manuring two acres as above, - -	5	9	4
	28	16	10

Third Year.

Rent, &c. - - - - -	15	0	0
Mowing, making, &c. eight acres of grafs, at three shillings per acre, -	1	4	0
Stacking, &c. - - - - -	1	4	0
Weighing, marketing, &c. - - -	0	12	0
Expences on cattle, - - - - -	0	2	0
Fifteen crones, - - - - -	3	15	0
Manuring two acres as above, - -	5	9	4
	27	6	4

Fourth Year.

Rent, &c. - - - - -	15	0	0
Mowing and making twelve acres, at three shillings per acre, - - - - -	1	16	0
Stacking, &c. - - - - -	1	16	0
Weighing and marketing, - - -	0	18	0
Expences on cattle, - - - - -	0	5	0
Fifteen crones, - - - - -	4	0	0
Manuring two acres as above, - -	5	9	4
	29	4	4
	Fifth		

Fifth Year.

					<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent, &c.	-	-	-	-	15	0	0
Mowing and making ten acres,	-	-	-	-	1	10	0
Stacking, &c.	-	-	-	-	1	10	0
Weighing and marketing,	-	-	-	-	0	16	0
Expences on cattle,	-	-	-	-	0	3	0
Fifteen crones,	-	-	-	-	3	7	6
Manuring two acres as above,	-	-	-	-	5	9	4
					27	15	10

Sixth Year.

Rent, &c.	-	-	-	-	15	0	0
Mowing and making nine acres,	-	-	-	-	1	7	0
Stacking, &c.	-	-	-	-	1	7	0
Weighing, &c.	-	-	-	-	0	14	0
Expences on cattle,	-	-	-	-	0	4	0
Fifteen crones,	-	-	-	-	4	5	0
Manuring two acres, as above,	-	-	-	-	5	9	4
					28	6	4

Seventh Year.

Rent, &c.	-	-	-	-	15	0	0
Mowing and making twelve acres,	-	-	-	-	1	16	0
Stacking, &c.	-	-	-	-	1	16	0
Weighing, &c.	-	-	-	-	0	18	0
Twenty crones,	-	-	-	-	5	0	0
Expences on cattle,	-	-	-	-	0	5	0
Manuring two acres, as above,	-	-	-	-	5	9	4
					30	4	4

Eighth Year.

Rent, &c.	-	-	-	-	15	0	0
Mowing and making eight acres,	-	-	-	-	1	4	0

Carry over 16 4 0

B b 3

Brought

				<i>l.</i>	<i>s.</i>	<i>d.</i>
			Brought over	16	4	0
Stacking, &c.	-	-	-	1	4	0
Weighing, &c.	-	-	-	0	10	0
Twenty crones,	-	-	-	5	10	0
Expences,	-	-	-	0	7	0
Manuring two acres, as above,	-	-	-	5	9	4
				29	14	4

Ninth Year.

Rent, &c.	-	-	-	15	0	0
Mowing and making ten acres,	-	-	-	1	10	0
Stacking, &c.	-	-	-	1	10	0
Weighing, &c.	-	-	-	0	8	0
Twenty crones,	-	-	-	3	15	0
Expences on cattle,	-	-	-	0	10	0
				22	13	0

P R O D U C E.

First Year.

Ten loads of hay, wafted to eight, and fold in the winter at two pounds per load, - - - - -	16	0	0
Fifteen old crones, fold fat, with their lambs, at fifteen shillings per couple, -	11	5	0
As no expences are calculated for the dairy, such as wood, utensils, &c. I shall lay the clear profit of the cows at four pounds each*, which is what I have generally made of mine, every thing			

paid,

* I find it is thought too high to reckon the profit of a cow
at four pounds. But no one I apprehend will think it so,
when

	<i>l.</i>	<i>s.</i>	<i>d.</i>
paid, and yet kept a calf now and then for stock: one I reckon this year,	-	12	0 0
I shall not explain all the method of managing the hogs, but lay the clear profit of a sow at different sums, such as I have generally found my own pro- duce,	- - - -	6	0 0
		45	5 0

Second Year.

Eight loads of hay, wasted to seven, and sold at two pounds per load,	- -	14	0 0
Carry over		14	0 0

when they are informed that the common price of hiring cows (in the country in question) is three pounds, for the profit—Judge then if it may be reckoned at *four*. Mr. *Ellis*, in his *Practical Husbandman*, also tells us, the common *clear* profit of a cow is four pounds—and from the best information I can gain, from *old* and *experienced* husbandmen, I find they ever calculate the profit at that sum, or rather more—when the summer-food is not reckoned. It is said, in answer † to my calculation, that the profit of a cow is forty shillings only, pigs included, in the west of *England*—Now the summer-feed of six months, at two shillings per week, amounts to forty-eight shillings,—consequently a cow yields (there) instead of profit, eight shillings a year loss.

With some difficulty, I gained of a neighbouring farmer, a determinate piece of intelligence; *viz.* that he sold the milk of a cow, by measure, from *May* till *October* inclusive this year 1766. She gave 369 gallons, which he sold for six pounds two shillings. I leave it to any one to judge whether her *winter* food came to forty-two shillings? There was nothing remarkable in the goodness of the cow, or her feed. As many better fed, as worse. Let me further add, that I am since informed, on good authority, that cows well fed between *Braintree* and *Walden* in *Essex*, yield 8 *l.* produce; the profit must be much higher therefore than I have laid it.

† See the *Museum Rusticum*.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	14	0	0
Twenty crones, sold fat at seventeen shillings per couple, - - -	17	0	0
Three cows, at four pounds each, -	12	0	0
One sow, - - - -	6	5	0
	49	5	0

Third Year.

Ten loads of hay, wasted to eight, sold at two pounds per load, - -	16	0	0
Fifteen crones, sold at fifteen shillings per couple, - - - -	11	5	0
Four cows, the new one at three pounds (the calf is now a cow) - -	15	0	0
One sow, - - - -	6	10	0
	48	15	0

Fourth Year.

Fourteen loads of hay, wasted to twelve, -	24	0	0
Fifteen crones, sold per couple at fifteen shillings, - - - -	11	5	0
Four cows, the new one three pounds five shillings, - - - -	15	5	0
One sow, - - - -	7	0	0
	57	10	0

Fifth Year.

Twelve loads of hay, wasted to ten, -	20	0	0
Fifteen crones, sold per couple at sixteen shillings, - - - -	12	0	0
Four cows, the new one at three pounds ten shillings, - - - -	15	10	0
One sow, - - - -	5	0	0
	52	10	0

Sixth

Sixth Year.

				l.	s.	d.
Ten loads of hay, wasted to eight,	-			16	0	0
Fifteen crones, fold per couple at sixteen						
shillings,	-	-	-	12	0	0
Four cows,	-	-	-	16	0	0
One fow,	-	-	-	7	10	0
				<u>51</u>	<u>10</u>	<u>0</u>

Seventh Year.

Fourteen loads of hay, wasted to twelve,				24	0	0
Twenty crones, fold per couple at seven-						
teen shillings,	-	-	-	17	0	0
Four cows,	-	-	-	16	0	0
One fow,	-	-	-	5	0	0
				<u>62</u>	<u>0</u>	<u>0</u>

Eighth Year.

Twelve loads of hay, wasted to ten,	-			20	0	0
Twenty crones, fold per couple at sixteen						
shillings,	-	-	-	16	0	0
Four cows,	-	-	-	16	0	0
One fow,	-	-	-	5	15	0
				<u>57</u>	<u>15</u>	<u>0</u>

Ninth Year.

Twelve loads of hay, wasted to ten,	-			20	0	0
Twenty crones, fold per couple at four-						
teen shillings,	-	-	-	14	0	0
Four cows,	-	-	-	16	0	0
One fow,	-	-	-	7	0	0
				<u>57</u>	<u>0</u>	<u>0</u>

E X -

EXPENCES.

				l.	s.	d.
1st Year,	-	-	-	45	16	10
2d Year,	-	-	-	28	16	10
3d Year,	-	-	-	27	6	4
4th Year,	-	-	-	29	4	4
5th Year,	-	-	-	27	15	10
6th Year,	-	-	-	28	6	4
7th Year,	-	-	-	30	4	4
8th Year,	-	-	-	29	4	4
9th Year,	-	-	-	22	13	0
				269	8	2

PRODUCE.

1st Year,	-	-	-	45	5	0
2d Year,	-	-	-	49	5	0
3d Year,	-	-	-	48	15	0
4th Year,	-	-	-	57	10	0
5th Year,	-	-	-	52	10	0
6th Year,	-	-	-	51	10	0
7th Year,	-	-	-	62	0	0
8th Year,	-	-	-	57	15	0
9th Year,	-	-	-	57	0	0
Produce of nine years,	-	-	-	481	10	0
Expences of nine years,	-	-	-	269	8	2
Total profit in nine years,	-	-	-	212	1	10

which is twenty-three pounds eleven shillings and two-pence per annum, or one pound three shillings per acre profit.

The above account discovers the vastly superior advantages of grafts, with us, to arable land.

You

It will certainly be remarked, that nothing is reckoned for losses of stock; but in answer to that I should observe, that nothing is calculated in the arable account for some bad years, when in such land not a quarter of a crop is produced: and I do not mean this calculation as perfect (that is impossible) but only to discover the *proportion* between the one method and the other; and from what I have observed, and gathered from the information which the most intelligent farmers can give me, I am clearly of opinion, that the chances, on the whole, are much in favour of the grass-land, the crop of hay and feed being much more regular than those of corn, clover, or turnips; and supposing the eighty bushels of clover-feed, yet the grass-profit far exceeds the arable; but, as I observed, the probability lies against the latter, supposing the profit to be only nine pounds fifteen shillings and six-pence *per annum*.

I should again remark, that I supposed these twenty acres to be an addition to a farm, not one by itself, and so compared the respective profits; therefore I have not allowed any thing for the feed which the
above-

above-mentioned cattle may accidentally have on the arable-land, or turnips which they may consume in the winter; and for this reason, because, although it appears to me that grass is the most profitable husbandry, yet a certain quantity of ploughed land should undoubtedly be a part of every grass-farm, for the raising turnips, some artificial grass, and fodder* enough for the winter's food.

The three last years I could have reckoned two steers fed on the grass ready for turnips in the winter, and in some other articles I have much under-calculated the matter, I am certain, lest the want of winter fodder should be an objection.

I reckon the hay all sold at forty shillings a load; whereas it is seldom in nine years less than that, and frequently fifty or sixty shillings: but I think no objection can be made in this respect, as when I calculate the profit of the grass-land I have at present, I never think of doing it otherwise

* Called in *Suffolk*, *flaver*, which, according to *Shakespeare*, is the best sort of wheat-straw, used for thatch, &c. See *TEMPEST*, also wheat-straw in general.

than

than in the manner above, as such is the profit arising from my having such a quantity of grass, and which I could not make of any ploughed land without the grass. If all my arable fields were employed in raising fodder and turnips for the cattle supported in summer on a very large quantity of grass, the profit would be five times as large as from raising corn in the common course of husbandry.

* * *

In addition to the foregoing calculation, I shall give another made by a friend of mine in my neighbourhood, founded on the event of five years comparison, in his own farm.

Expences on an Acre of Arable Land four Years, the Proportion taken.

						<i>l.</i>	<i>s.</i>	<i>d.</i>
Rent,	-	-	-	-	-	1	0	0
Tythe and town-charges,				-	-	0	5	0
Manure,	-	-	-	-	-	0	10	0
Ploughing and harrowing,				-	-	0	10	0
Seed,	-	-	-	-	-	0	4	0
Fences,	-	-	-	-	-	0	1	0
						2	10	0

Pro-

Produce in four Years.

				<i>l.</i>	<i>s.</i>	<i>d.</i>
Turnips,	-	-	-	2	10	0
Four quarters and an half of barley, at sixteen shillings,	-	-	-	3	12	0
Clover,	-	-	-	2	10	0
Three and a half quarters of wheat, at thirty-two shillings,	-	-	-	5	12	0
				14	4	0
The fourth,	-	-	-	3	11	0
Deduct expences,	-	-	-	2	10	0
Profit per acre,	-	-	-	1	1	0

PASTURE LAND.
EXPENCES.

Rent,	-	-	-	-	1	0	0
Tythe and town-charges,	-	-	-	-	0	5	0
Manure,	-	-	-	-	0	10	0
Weeding, cleaning and rolling,	-	-	-	-	0	4	0
Mowing, making, &c. &c.	-	-	-	-	0	6	0
Fences,	-	-	-	-	0	1	0
					2	6	0

PRODUCE.

Thirty-five hundred weight of hay, at two shillings,	-	-	-	-	3	10	0
After-feed,	-	-	-	-	0	10	0
					4	0	0
Expences,	-	-	-	-	2	6	0
Profit per acre,	-	-	-	-	1	14	0

In

In this calculation the produce of the arable-land is such as, I am certain, my friend met with, or he would not have minuted it; but it is such as not one in ten meets with in my neighbourhood, even if they pay a pound an acre rent.

In addition to these calculations, I shall insert a minute or two respecting the profit of grass-lands.

EXPERIMENT, 1763.

Food, Produce, and Expences of a Dairy of Four Cows in a Year.

Their food four small pastures, amounting to about sixteen acres, two of them I fed in the spring, rather late before I shut the pasture lands up for hay: another, of six acres, the cows had to themselves till the others were mown; and then I shut that up for a rowen (aftermath) crop of hay, cutting it the 20th of *August*.

Therefore they had first that of six acres, another of two acres, which is common for all my cattle, being never mown; next a five-acre piece, after the hay was cleared from it, and then the other field of three acres: besides which, they ran 4 days in my
 clover,

clover, till, finding the butter tasted, I took them out.

It will appear also, by the following account, that they eat in winter one tun and seven hundred weight of hay, and two loads and a half of straw bought for them, besides their share of some which grew on my farm, the whole of which (spring-corn straw) amounted only to five acres of oats for them and four horses; the chief of my lands lying that year fallow.

E X P E N C E S.

	l.	s.	d.
1763. April 27. For two hundred weight of hay, - - -	0	5	0
August 8. Twenty-five ditto, - - -	1	17	6
Nov. 30. A load of straw, - - -	0	14	0
Dec. 30. Half a ditto, - - -	0	5	0
1764. Feb. 15. Ditto, - - -	0	3	0
Feb. 20. A load ditto, - - -	0	11	0
Sundry expences in the dairy, - - -	0	10	10
	4	6	4

In the above account is included nothing for firing, which cost me very little, as the small bush-faggots, which I grub up on borders of fields to clear them for the grass to rise, completely served my dairy this year: these faggots are difficult
of

of sale, fetch but little, and must be rooted up if no cows are kept.

PRODUCE.

Butter, milk, and cream; the butter six-pence per pound, the cream six-pence per pint, the milk one halfpenny per pint (the market prices)	l.	s.	d.
	9	4	8
Seven hundred and sixty pounds of cheese, sold at two-pence halfpenny per pound,	7	8	6
The value of two yearlings, kept for stock, (valued by a farmer, who offered to take them at the price) -	3	10	0
The suckling calves sold at	0	15	6
	<u>4</u>	<u>5</u>	<u>6</u>
	20	18	8
Deduct expences,	4	6	4
	<u>16</u>	<u>12</u>	<u>4</u>
Profit, four pounds three shillings per cow,			

A notable farmer's wife would have made five pounds per cow. There is a great difference between one kept, merely for convenience, under a servant's management, and a farmer's.

Cc

EXPE

EXPERIMENT. 1764.

Food, Produce, &c. of Four Cows a Year.

Pastures the same as the last year. Turned them into an acre of the five-acre field the sixteenth of *May*, besides which, they had the three acres to themselves. Mowed this year the six acres, and the remaining four of the five acres. No clover.

EXPENCES.

1764.		l.	s.	d.
Faggots for firing,	- - -	1	10	0
One tun and two hundred weight of hay,	- - -	2	15	0
Half a load of straw,	- - -	0	6	0
Sundry small articles,	- - -	1	3	10 $\frac{1}{2}$
		5	14	10 $\frac{1}{2}$

The fire-wood was most of it this year brush-faggots out of a wood, and but few of the small bush-faggots: I am therefore enabled better to calculate their value. Besides the straw bought, they had what was to spare of my farm.

PRODUCE.

1764.		l.	s.	d.
June	Three calves, sold to the butcher,	3	6	0
	Carry over	3	6	0

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	3	6	0
Three hundred and twenty-seven pounds and a half of butter,	8	16	6½
For seven hundred and nine pounds of cheese; five hundred and fifty-three at two-pence halfpenny, and one hun- dred and fifty-six at two-pence,	7	1	2½
For milk and cream,	2	2	0
Sold two heifers, the last year's year- lings, for	7	0	0
Valued, &c. at then	3	10	0
	3	10	0
Expences,	24	15	9
	5	14	10½
Profit, about four pounds fifteen shillings per cow,	19	0	10½

I think these two accounts (not calculations) must be satisfactory. It will, doubtless, be observed, nothing is yet said of hogs in the above. I have reckoned nothing for all the skim-milk and whey: these were given to the hogs.

I shall now add some observations, which I had annexed, to the account of cows for 1763, as follows.

There are some material observations to be made on this account. Is four pounds three shillings a profit equal to that of grazing? Surely not. Two steers, or heifers, may be kept and fatted in the place of one cow: these will undoubtedly pay better.

I am aware of the objection, that a dairy is never supposed to answer well without a good dairy-wife to do all the business of it. This certainly makes a material alteration: but four pounds a cow is, in this neighbourhood, thought pretty near the profit of one. Yet it must be evident, if there was no further consideration, a dairy must be attended with constant loss: this consideration is the advantage derived from the hogs, which evidently compose the *profit* of a dairy.

I am not yet able, from experiments, to assert how many hogs may be kept on a given number of acres without the aid of a dairy: this is necessary to be known before the exact profit of cows can be ascertained. The spring-litters stand greatly in need of the milk and whey, which is then coming on; so that few, I doubt, could
be

be bred at that time of the year without them. It is necessary here to say something concerning them.

EXPERIMENT. 1763.

Food and Produce of a Sow, and the Pigs bred by her, in a Year.

She pigged in *April* seven pigs, and in *October* eleven.

EXPENCES.

1763.				<i>l.</i>	<i>s.</i>	<i>d.</i>
Nov. 18, &c. For grains,	-	-	-	0	10	4
Cutting a litter,	-	-	-	0	1	6
Dec. 8, and Jan. 21. Five quarters of						
pease,	-	-	-	5	1	0
Expences on ditto,	-	-	-	0	1	0
For ten bushels of barley,	-	-	-	1	0	0
Feb. 17 and 25. Expences in selling,	-	-	-	0	11	6*
For one quarter and two bushels of						
peas,	-	-	-	1	6	3
				8	11	7

* This year I employed a bailey, none of whom can find out customers without feeling the same drowth as stage-coachmen when they descry a sign.

P R O D U C E.

					l.	s.	d.
Oct. 30.	A pig,	-	-	-	0	2	3
	A fat hog,	-	-	-	1	9	0
	A fat hog, one hundred and ten pounds weight,	-	-	-	1	12	9
Feb. 17.	Ditto, one hundred and sixteen pounds weight, at four shillings and ten-pence per stone,	-	-	-	2	0	0
	Heads, &c.	-	-	-	0	5	3
Feb. 22.	Three fat hogs, fold alive,	-	-	-	6	7	0
	One ditto, at four shillings and ten- pence per stone,	-	-	-	2	0	0
	Ten live pigs, carried to next year's account, valued at	-	-	-	4	16	6
					18	12	9
Expences,	-	-	-	-	8	11	7
Profit,	-	-	-	-	10	1	2

The dairy this year was four cows: all the whey and skim milk were thrown into the hogs cistern, together with the dish-wash and offal of the kitchen, and the grains of about ten quarters of malt used in the family, besides which, 6 quarters and 4 bushels more I bought for them: all this composed their common wash while lean: for three months in the summer, the sow and the seven pigs ran in clover. These articles, besides common grass, (on which,
by

by the by, they feed as well as sheep) were all their lean food.

Now, from the above account must be deducted the value of the clover-feed, as that certainly was not from grass-ground, and may be estimated. Such deductions I have no objection to, as we may come near the mark in valuing: the preceding calculation, however, does not require them, as the twenty acres were to have been an addition to a farm, not one by itself.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Seven hogs, at fourteen pence per week,			
for three months, come to	-	0	14 0
Six quarters and four bushels of grains		0	10 4
		1	4 4

EXPERIMENT. 1764.

Food, Produce, &c. of Hogs a Year, maintained by a Dairy of four Cows.

The old sow pigged in *April*, eleven pigs, and again in *November*, twelve; the young one seven, in *January*, 1765.

EXPENCES.

1764.	l.	s.	d.
Ten pigs, from last year's account, to be reckoned here,	-	4	16 6
For forty quarters of grains,	-	2	15 8
For seven quarters of pollard,	-	1	12 5
For a young sow and boar,	-	1	4 0
For two bushels of oats,	-	0	4 0
For tail-barley,	-	0	14 3
For six bushels of barley,	-	0	14 3
For one hundred and twenty bushels of turnips, and five bushels of cabbages; say one hundred and twenty-five bushels of turnips,	-	0	0

N. B. My crop of turnips this year produced eight bushels per rod (their root and top cut off): one hundred and twenty-five bushels is therefore sixteen rods, which, at two pounds two shillings per acre, the price this year, comes to four shillings; but I have said six shillings.

Sundry expences,	-	1	5 4
		13	12 5
Three months feed in clover,	-	0	12 0
		14	4 5

PRODUCE.

Aug. 22. Sold eleven pigs, lean, for	-	5	15 0
Nov. 13. Sold nine lean,	-	12	3 0
		17	18 0
Brought over		17	18 0
			Brought

l. s. d.
Brought over 17 18 0

March 25. Value of stock carried to next year (the old fow excepted) viz. the young fow (one of the ten)

with six pigs,	-	-	2	12	6			
Twelve pigs,	-	-	5	8	0			
A little fow with pig,								
(bought May 19)	-	-	1	5	0			
The boar,	-	-	1	1	0			
						10	6	6
						28	4	6
Expences,	-	-	-	-	-	14	4	5
Profit,	-	-	-	-	-	14	0	1

Before I make any observations on this account, I shall explain the price I charge for clover-feed.

I am enabled to do it very clearly this year, as I had none of my own, but hired a field of two acres and three rood, at one pound thirteen shillings *per* acre, from May to Michaelmas. I rented it purposely for my horses, but kept the ten hogs in it for three months.

The price of the clover was four pounds ten shillings and six-pence. The cattle it fed were :

Five

Five horses, three months;
 Ten hogs, three months;
 Thirty-eight sheep and lambs, one
 month;
 Two heifers, two months.

The common price of joisting a horse is one shilling and six-pence *per week* in clover; but that I may raise the price for the hogs, I will reckon the rest of the cattle as low as possible.

Five horses, say at three shillings and six-pence per week, for three months,	-	2	2	6
Thirty-eight sheep and lambs, at two-pence per couple, for one month,	-	1	5	4
Two heifers, at three pence per week each, for two months,	-	6	8	0
The hogs,	-	0	12	0
		4	7	4

This comes as near the truth as any calculation I can make; and I can every year, by hiring clover, keep my hogs as cheap as this, without any assistance from arable-land of my own.

The chief remark to be made on these experiments is, that the profit on hogs in a dairy-farm, is very considerable. The food

food here specified, and which did not come from the dairy, is no impeachment of this assertion; because the direct inquiry is, What stock of hogs ought to be assigned to a given number of cows? That is, how many litters of pigs will the cows maintain? It being greatly advantageous to keep the full number, and, if necessary, to purchase other food, as we have seen; and such expences deducted from the produce, the remainder belongs to cows, since without them the pigs could not be reared.

Of the Improvement of wet Pastures.

AS I have, within a few years, not only had some experience in my own farm, but observed the methods employed by many neighbouring gentlemen and farmers in mending their pastures, I shall communicate a few of my remarks on the improvement of wet pastures; a subject which may prove, perhaps, of some little utility, as I shall speak of nothing but what I have either performed myself, or seen in my neighbourhood.

The particular lands of which I speak are loose, woodcock, brick-earth soils for about eighteen or twenty inches, and under that, clay to a great depth.

Some that I have improved myself were exactly level, so as to be quite poisoned with the wet, which could not drain off.

From the best observations I could make on many experiments, the following is the method which answers best to improve them. I shall also insert the expence.

The first thing to be done is, to make large, deep ditches round every field, and,
if

if they are large, to divide them into smaller ones, of five, six, or seven acres each, by new ditches: nothing is attended with a more sudden improvement of all the ground near the borders of the fields, than good ditches.

I generally make mine six feet perpendicular deep, seven wide at top, and three at the bottom. I never pay for them by the rod, (which is customary) but give two-pence halfpenny *per* load, of thirty bushels, for all the clay, &c. that is thrown out of them, and two shillings and six-pence a score loads for filling and spreading it.

These ditches should be made in such a manner, that no water can remain in them, but a descent from one to another to carry it quickly off.

It may be easily imagined how much these must drain the land, besides the quantity of excellent manure (clay) which arises out of them. Add to this, the great convenience of having such fences about a farm, that the farmer is sure to find his cattle wherever he turns them, instead of their breaking perpetually into his corn or hay-fields, which, in multitudes of farms,
is

is so often the case: it is sometimes the work of a boy, only to be hunting after hogs and sheep that go astray for want of good fences.

In the banks of new ditches we always lay white thorn, fifty roots to a rod (the workmen are allowed six-pence *per* hundred for gathering them;) but I always avoid intermixing any thing with it, especially hasel, for in the nut-season fences are pulled in pieces for the fruit by all the boys and girls in the neighbourhood; and oak, ask, &c. only to give an opportunity to get over the hedge with great ease. Sal-low, willow, elder, &c. are to be avoided in the hedge, or by way of hedge-stake for the dead hedge, as they grow so fast as quite to overshadow the quick-set, and even destroy it. After frequent cuttings, to render the plants thick and strong, I keep the quick-sets regularly clipped, which, in a few years, render the fence impenetrable to man or beast, considering the largeness of the ditch.

If an old fence is grown bad or thin, or composed of improper plants, I never yet observed it improved by planting quick-sets

fets in the gaps: the best way is, to reverse the bank, and plant fresh white-thorn.

One advantage arising from good fences is not apparent at first sight. To the disgrace be it spoken of most of the gentlemen of large fortunes in this neighbourhood, the game is wretchedly destroyed by poachers, who take it with night-nets. These vermin, who are generally labourers, swarm in every village around me. Their method is this: they take the farmer's horses out of his fields, and, after their doing a hard day's work, ride them all night, as fast as they can make them go, over the stubbles, to catch the partridges, blundering over every hedge (except such as I have described) in their way, oftentimes faking the horses, making gaps in the fences, riding over standing corn, clover for seed, or any thing that is a cover for birds, and after damaging the farmer in a most shameful manner, carry the produce of their infamous labour to many, who, to their great dishonour, encourage these rascals for their convenience. The money they get is spent at the next ale-house, and instead of do-

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ing the farmer a good day's work, they are drunk, asleep, or idle, the whole day.

Now there are very few farmers horses that will leap a gate; but most will plunge through such hedges as are common hereabouts: none could pass such ditches as I always make and recommend. A farmer in the parish where I live, has so effectually fenced in his fields with prodigious ditches, that I have heard him declare, that not a single night-netter has been on his grounds on horse-back; and were they to attempt it, they would lose more time in passing one ditch than was necessary to drag some whole farms.

The pernicious effects to farmers, of this abominable practice, are notorious, and cry aloud for redress: if they would ease themselves, I know of no way but such ditches as I have described.

In what manner they are to defend themselves against another species of vermin, *hunters*, I know not. A *real sportsman* will do as little damage as possible to the farmers; but I know several packs of hounds kept by subscription amongst low people, and followed by an incredible quantity of
riff.

riff-raff; country surgeons, tradesmen, and a number of farmers (to their shame be it written) who do the country ten times more mischief than a set of sporting gentlemen; for being mounted on vile horses, they scarce take a clean leap, consequently blunder through the hedges to their destruction, and if the ditches happen to be good, break the gates and stiles to pieces: indeed it must be confessed that the gentry are much too free with cutting, breaking, and twisting gates off their hinges, to the vast damage of the farmers. There is but one way of being secure against hunters; which is to make immense ditches, and very high banks well planted with quick-fets, to have the gates much higher than common, and to iron them from the hinges to the lock: but then the expence is so great, that the remedy would be worse than the disease.

But to return.

When the ditching is done, the next work is to land-drain the whole fields in such a manner, that every part of them may be laid dry. In a pasture of six acres I did two hundred rods. If there is the least fall in any part, or any place more

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wet than others, the drains should be cut thro' them. If the surface is exactly level, the depth of the drains should vary, so that the water may every where have a descent.

These drains are made here, in general, thirty-two inches deep, twenty inches wide at top, and four wide at the bottom. They are filled eight inches deep with either stones or wood; but I should ever recommend the former, as the most effectual and lasting, to those who are not desirous of saving the difference of the expence. However, I know many fields in this parish and neighbourhood, that are drained with wood, and which answer extremely well; and I have been assured that they will last twenty or thirty years *. Nay, in some parts of *Essex* I hear they do it with straw alone; but this must be of service for only a few years, unless the soil, when the straw rots, forms an arch: if stone be used, there can be no doubt of its lasting. The labour of the whole is three-pence *per rod*.

If with stone of the farmers, a load of thirty bushels will do three rods, and costs

* Since writing the above, I have met with some in perfect order, 40 years old; and likewise many that run as well as stone ones.

one shilling and a halfpenny stubbing and picking; so the expence of a rod is sevenpence, besides carriage of the stone, which will not be much: but if he buys his stone, as is much the most probable in this country, we may suppose he must go two miles to fetch it, and give twenty-pence for thirty bushels ready picked: the carriage is worth as much more, thus the stone, in this way, will cost *per* rod better than thirteen-pence.

If bushes are used, a load of forty faggots will cost the farmer, if he buys them, or be worth, if he has them, five shillings, and cost cutting one shilling*. They will do ten rods; so that the whole expence of doing a rod with them will be ten-pence, and with stone one shilling and four-pence.

The very first year the prodigious advantage of these drains appears, especially if the season proves wet. The grass (or corn if in ploughed fields, for they answer in all) will be fresh, vigorous, and sweet, wherever the pastures are drained.

I have a field of six acres (mentioned above) which by land-draining, ditching,

* Good bushes proper for strong fences cannot be had under 7 s. *per* load.

and manuring, is an exceeding good pasture, and has produced two tuns and ten hundred weight of hay *per* acre, in a very good year, and generally thirty-five hundred weight *per* acre; whereas the pastures adjoining are scarce worth the farming, and let but at seven shillings *per* acre, producing scarce any thing but a little feed for lean cattle. The soil is the same in both; the six acres, about twelve years ago, being full as bad as the rest.

To improve such wet land, nothing can be more advantageous than the clay which is thrown out of the ditches. Eighty loads *per* acre is the quantity I have laid on, and have been told by several sensible farmers (who clay a good deal) that it is a proper covering; but if nothing is mixed with it, ninety-five or one hundred. I know a piece of grass land greatly improved, on which were spread one hundred and fifty loads *per* acre.

My method is to make a large hill of manure, by first laying a quantity of clay regularly on a heap; then placing a thin layer of muck, such as I have, upon it, either my stable or rack-yard dung, or
bring-

bringing it of any kind in my waggon from the nearest town; on this layer, another thick one of clay; then the second of dung, and so on; letting the proportion be about twenty loads of dung to fifty of clay. These heaps, after remaining six months without stirring, I mix well together by turning them over, which a workman will do, at the rate of eight shillings for one hundred loads. Let it lie six months longer in this state, and then carry it on to the land, paying two shillings and six-pence *per* score loads for filling and spreading. This I take, from experience, to be by much the best way of manuring with clay, as it works and impregnates the soil much sooner than alone.

Whenever I clay arable-land, I do it on clover-pastures after the crop of corn is off, managing it in the same manner as for pastures. If it is ploughed in directly, it is several years before it works; but having a winter and summer to dissolve and powder it, it washes into the soil more equally, and much enriched by the effects of the air, acquired by being so long exposed.

These are the principal points to be observed in improving such wet, cold, loose

pastures as I have described: some that I have quite changed by these means were half over-run with moss and rushes; but draining them thoroughly, and claying them, kills all trumpery of this sort, and presents the farmer with so admirable a view of good pasture for dairy or grazing, where so lately nothing could live, as to be equalled in scarce any thing of the kind.

But as all improvement ceases to be such when more money is spent in it than the advantages will repay, I shall in a few words set forth how far this is from being the case here. I will suppose two or three fields are improved, amounting in the whole to twenty acres.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Sixty loads of clay per acre thrown out of the ditches, twelve hundred loads, at two-pence halfpenny per load, - -	12	0	0
I will suppose sixty rod of new ditching done, which, before clay is thrown out by the load, will cost one shilling per rod, - - - -	3	0	0
Three thousand quick-sets, at six-pence per hundred, - - - -	0	15	0
Land-draining seven hundred rod with bushes (this is the quantity I have now marked out in a field of twenty acres) at ten-pence per rod *, - - -	29	3	4
Carry over	44	18	4

* In *Essex*, however, they make their drains but a rod asunder.

l. s. d.
Brought over 44 18 4

N. B. I had a great part of a crop of barley killed in a field of this size with the wet: I had therefore a fine opportunity of marking exactly where the drains should be made, which ought, on such occasions, never to be omitted, were it only for the common water-furrows which are made for every crop. In some fields, unless such a guide offers, it is very difficult to tell exactly where to make the land-drains.

Turning and mixing one thousand six-hundred loads of manure,	-	-	6	8	0
Filling and spreading one thousand six-hundred loads, at two shillings and six-pence per score,	-	-	10	0	0
I will suppose that the work may be done the sooner if the farmer brings one hundred loads of the four hundred of dung from the nearest town; and as I have not reckoned the horses and driver for the clay-cart, I shall not in the bringing the dung: therefore the expences per waggon-load will be, the cost three shillings, boy six-pence, and turnpike six-pence. A waggon-load is two tumbrel-loads (in this country) so fifty loads, at four shillings, are					
	-		10	0	0
Total			71	6	4

This is three pounds eleven shillings and three pence *per* acre: and supposing the profit to last but twenty years, although the draining and ditching part

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will last twice that time, and the clay five and twenty as good as at first. But the farmers thereabouts seldom change their farms, if tolerable ones, living in them their lives, and their sons after them, with leases of seventeen, twenty-one, and twenty-five years: supposing twenty years profit, I say, the expences will then be, *per acre per annum*, three shillings and six-pence halfpenny.

So small is the expence divided. But now let us consider the profit.

Such land as I have described never lets here for more than ten shillings *per acre*, by far oftener for eight shillings, or eight and six-pence: and it is from my own experience, as well as various observations, that I assert the same land, after the improvements, will let to any tenant for seventeen, eighteen, and twenty shillings *per acre*.

I will suppose it only sixteen shillings, though I am certain that it is considerably under the mark: he then gains, in point of rent, six shillings *per acre*; and the whole calculation is absurd, if we do not add his whole proportional profit on the
acre;

acre: supposing his profit on it before improvement was a rent, ten shillings; afterwards it will undoubtedly be the same, at least; which adds six shillings more to the profit; so that the whole will be twelve shillings *per acre per annum*.

					£
Twelve shillings per acre is per annum, for					
twenty years,	-	-	-	-	240
Expences of improvement,	-	-	-	-	71
Clear profit,	-	-	-	-	169

					<i>l.</i>	<i>s.</i>	<i>d.</i>
That is per annum,	-	-	-	-	8	9	0
Deduct the interest of seventy-one							
pounds,	-	-	-	-	3	11	0
Clear profit per annum,	-	-	-	-	4	18	0

I think the case of this improvement is stated clearly; and must repeat, that I speak from experience. The sum to be expended on twenty acres will appear large to most farmers, whose property is not considerable; but the proportion holds for a single acre, and those who cannot afford to improve twenty, may three, four,

four, or five; and I make no doubt but in such an attempt they will find their account in it greater than I have stated it.

As I have mentioned a tumbrel-load to be thirty bushels, and a waggon-load to be but two tumbrels, I should observe that we carry away of muck fifty bushels at a time in our tumbrels, and so agree with our men in proportion to the thirty-bushel loads.

I have observed, that in making new ditches, or enlarging old ones, I seldom pay by the rod, but by the load: however, to those who chuse the former way, I would recommend that they have them worked by a frame of small slit deal, nailed into the exact size of the intended ditch, and agree with the workmen to do their work by it: this will prevent disputes which frequently arise.

Before I conclude this sketch, I shall once for all apologize for the inelegance of my language, and, perhaps, unnecessary repetitions; but it appears to me that the *matter*, in essays of this nature, is infinitely more material than the style. Indeed it is almost impossible to attend with success to the diction of a paper which contains a narrative

rative of farming experiments, full of cramp, barbarous terms, equally disagreeable and necessary: but one simple rational experiment is worth ten elegantly-flowing periods. The language of husbandry a farmer may understand, but that of *style* is to them unintelligible as *Hebrew*.

*Common Farmers vindicated from the Charges
of being universally ignorant and obstinate;
with some reflections on the present State of
Improvements in Husbandry.*

I.

THE following hints, on the situation of common farmers, were occasionally thrown together with intention to obviate the torrent of ridicule, the new improvements in husbandry let loose against them.

The conversation in any company seldom turns on country-business, but the common farmers are stigmatized with the appellations of *stupid fellows, prejudiced clowns, senseless men*, who tread in the steps of their forefathers without the idea of improvement, who drudge on in the old road, rather like machines than rational animals. Much declamation have I heard of this sort, and as I am a farmer myself, shall take this opportunity of vindicating, in some measure, my brethren from aspersions

sions not always so justly founded as peremptorily asserted.

The horse-boeing husbandry, the cultivation of artificial grasses, the mowing of wheat, with many other new improvements, have found numerous advocates among gentlemen-farmers: it shall now be my inquiry, whether the tenants do not act very wisely in refusing to meddle with experiments before the evidence of their senses gives them hopes of success.

In all the woodland country in my neighbourhood (I shall speak only of what I have seen, and know perfectly well) the farms are generally small, from twenty rising to two hundred pounds a year, and here and there one of more; but in general they are under an hundred: and the land lets from nine to sixteen shillings *per* acre.

It is pretty evident from hence, that no *fortunes* are to be made in them: a comfortable and decent living for the farmer and his family, and at his death a hundred pounds, besides his stock, is not very common among them.

In such a situation, would they not be prodigious fools to meddle with all the fashionable whims that are every day started

ed in farming? The track in which they are, they know will produce something: should they leave it for uncertainties which may produce nothing?—Surely not.

Let the landlord try experiments, and I will warrant, if a few years prove them to answer, the tenant will adopt them. But men who have little money before-hand, and rent and expences regularly to pay, act very prudently in being only spectators of these new fashions, till proof sufficient is afforded of their success.

The farmers I have talked with, are far from being the prejudiced people I have so often heard them represented; and many of them make no bad defence of themselves for not adopting the schemes of the gentlemen-farmers.

Men who farm their own lands ought to be cautious in stigmatizing farmers, and should first consider whether their accounts are so clearly kept, that they can perceive profit arising from their farming when rent is paid, supposing they lived under another man; and should also suppose they had no other cash ever in hand than what arose from their farm: if this management is not clearly followed, it is wonder-

ful impertinence to arraign common farmers for the narrowness of their views, when their own have not the extent to take in the fair compass of the question; yet is this frequently the case.

I know several gentlemen who are apt to talk in the common style, and extol their own methods of husbandry, which are calculated for the improvement of land, and the raising great crops.

These are great; with them quantities of manure, frequent fallowing, &c. out-do all the neighbouring crops. Here is fund for conversation; but where are the accounts? Let me see the expences. Could a farmer, who lives on his farm alone, support it? Would he starve with ten quarters an acre on his land?

Material inquiries these; but, alas! too seldom to be answered satisfactorily.

There is a medium in every thing. The farmers, I readily believe, are rather more backward in adopting improvements than reason, or, perhaps I should say, education will allow. But, on the other hand, gentlemen and authors are yet more apt to adopt chimeras at once, and then rail at their

their inferiors for not being as rash as themselves.

Experiment is the rational foundation of all useful knowledge: let every thing be tried, but do not expect it of those who cannot afford it: let the landlord play all imaginable tricks with his land; if out of the game of chance a lucky hit arises, the tenant's eyes will not be shut.

Many experiments have been lately made in this neighbourhood, at a considerable expence, and many more have failed than succeeded; I know but few that are yet sufficiently established in their credit, among even gentlemen themselves, for the farmers with any prudence to adopt them. I shall insert a few minutes taken of an unsuccessful experiment or two.

II.

Mowing Wheat.

I SHOULD premise, that a common way with the farmers in this country is, to sow their wheat on clover pastures, only turning up the surface once.

I mowed the half of eight acres, and reaped half, dividing the field in such a manner as to give each method a fair proportion of the weedy and clean parts.

The most judicious farmers here, generally cut their wheat a week before it is quite ripe, and leave it the longer in the field in shocks, that the corn may acquire a hardness, and the weeds have time to dry and die.

I laid each lot of wheat by itself, and have since thrashed and sold five quarters of each: the result of my experiment was as follows.

That which was reaped, was fit to carry in a week; that I mowed was so full of weeds in the bottoms of the sheaves, that, at the end of ten days, I could not carry it: if I had ventured, the sweat in the barn would have spoiled it.

The twelfth night, so much rain fell (several showers, slight ones, had fallen before, without damaging the wheat) as to be of prejudice to the corn: when a fortnight was elapsed, some of it was grown in the shock. At the end of sixteen days, I got it into the barn, much out of humour with my experiment.

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When I came to thrash, that which was reaped cost me three shillings *per* quarter, the other five shillings; a very fair difference, I am convinced, considering the length of the straw, and the quantities of weeds. Weeds there must be more of than in the other method, as they reap quite over most of them.

At market I sold the reaped wheat at two pounds *per* quarter, and the mown at thirty-five shillings. Here I shall close the comparison: if the value of a little pipy hard straw, and the saving in a slovenly expedition, are supposed to pay me five shillings *per* quarter; by all means let the practice advance: for myself, I shall be much more inclined to reap my oats, than mow my wheat.

III.

Lucerne.

I FALLOWED and ploughed two acres of light gravelly land till it was clear of weeds: this is the soil Mr. *Miller*, in his *Gardener's Dictionary*, says is most suitable

able to it; I therefore chose it in preference to several other kinds in my farm.

I sowed it in his manner, twelve pounds to the two acres, in drills two feet from each other, the beginning of *April*. The weather was favourable, and the plants came up tolerably well and regular.

During the whole summer I kept the spaces between the rows quite clear of weeds with hand-hoes, and gave it two ploughings, turning the land up to the plants.

The hoeing was a very considerable expence to me; nevertheless I was determined to give the plant a fair trial, therefore did not let the weeds rise at all.

After all the trouble I had with it, and the raillery I met with from the neighbouring farmers, I was rewarded about the beginning of *September*, with three hundred of lucerne hay, the value of which, did not a twentieth part pay even the hoeing of the crop.

The plants died away, and but few put out their leaves again in the succeeding spring.

I ploughed up the land, and sowed it with white oats, the largeness of which crop made me some amends for my disappointment, as I do not doubt having seven quarters and half *per* acre when they are thrashed.

As I laid no dung on the land, I attribute this extraordinary crop to the frequent hoeings.

Any person who has read the article *Medica* in *Miller's Dictionary*, and Mr. *Rocque's Short Treatise on Lucerne*, will perceive the methods to be diametrically opposite, as well as the opinions of the proper soil. It is to be regretted that authors, who write on gardening or husbandry, will not keep within their due bounds, and not ruin their compositions by vain attempts at universality.

Since the trial I made of this grass, I have heard of several persons who have been equally disappointed with myself, in following Mr. *Miller's* directions; and also of two or three who have sown lucerne in Mr. *Rocque's* method, on a rich mould, who have succeeded the first year very well, but with some doubts whether the crop will last.

If the description I have heard of lucerne, and its excellencies, is true, it would be a most valuable acquisition in all this country. Our only artificial grass is clover, which we can very seldom turn cattle into before the tenth or twelfth of *May*, long before which time our turnips are gone; so, for want of some grass which comes earlier, we are at a vast expence to feed our cattle, especially if the spring proves cold.

To supply, in some measure, this want, I have generally, at *Michaelmas*, sown a few acres of rye for feed in the following spring, and afterwards ploughed and prepared the land for turnips: and I proposed trying cole-seed for the same use.

The summer-feed of clover lets here extremely well; from thirty-five to forty-five shillings *per* acre, from old *May*-day to old *Michaelmas*-day; and I have known to fifty shillings given.—From these circumstances it is extremely clear, that lucerne, if it succeeded, would prove an object of great importance.

I have inserted these two experiments, not as criterions from which to form a judgment, having succeeded myself with

lucerne, for the first year, otherwise managed, and being credibly informed, that mowing wheat has answered to others; but as a proof that both points will admit, in many circumstances, of great doubt, and until these doubts are fully removed, no one can stigmatize common farmers for being shy of experiments.

VI.

Of manuring Land at a large Expence.

THE following instance of manuring at a very large expence, I am perfectly well acquainted with, having long seen the effect, which is not, however, so certain but some neighbouring farmers dispute it.

I insert it as a proof, that even common farmers are not always backward to expensive improvements.

A farmer, at the distance of about four miles from the nearest town, has regularly, for many years, employed his team, and a stout waggon, in bringing manure from it.

I have brought many loads myself, tho' nothing in proportion to him. From what I have experienced, and from his account, the expences on each load are as follows:

	s.	d.
For a waggon-load of about one hundred bushels of manure, either cinder-ashes, old mortar, hog-muck, rotten horse-muck, or cleaning of the streets, &c. mixed, one load with another costs	3	0
A man and a boy a day (little time is to be spared after the horses are cleaned and well looked after, and the manure unloaded)	1	6
Turnpike	0	6
The work is generally done at the most leisure time of the year, mostly in winter, when the farmers allow their men a stated quantity of corn and hay for their horses when they do not work: they must have extraordinary, on account of the journey, a bushel of oats, which, at twelve shillings per quarter, is	1	6
The lowest that can be reckoned for chaff and hay, is	1	0
The working the horses in drawing so great a weight (frequently four tuns, and generally three and a half) can scarcely be laid at less than one shilling per horse (I am sure I would not let my horses at that rate)	4	0
	11	6

In this account, nothing is reckoned for the wear and tear of waggon, harness, and

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horse-

horse-shoes, (no trifling articles) and yet each load amounts to eleven shillings and six-pence brought home, besides the after expence of spreading it on the land. In appearance this can never answer: but no farmer in the country understands business better than this man, none raises such great crops (for he is almost constantly manuring some field or other) and he is evidently and well known to be in a thriving condition.

He began with a very small farm, and now rents above two hundred a year.

It may, however, admit of a query, Whether the above expences are not too great for the crops to repay?

Whether the money would not be better laid out in manuring with clay, which is to be had every where in this country? Our soils are, in general, either a loam, brick-earth, or woodcock, and under them clay: we can have it thrown out of our ditches (by which means also our fields are drained) at two-pence halfpenny *per* tum-brel-load of thirty bushels, and filled and spread at two shillings and six-pence for every twenty loads.

Of

Of Broad-Wheeled Waggon's.

AMONG the many improvements which are daily making in agriculture, and the instruments and machines employed in it, that of broad-wheeled waggon's is far from being the least considerable, as they are equally useful to the farmer and the carrier.

Great, however, as the advantages are which attend the use of them, very few are built by farmers. I am informed that in *Kent*, and some other parts of *England*, they are coming into use; but in *Suffolk* and *Norfolk*, where there are many farms equal, if not superior to most in *England*, I know but very few used by farmers.

This is the more surprizing, as the great convenience of them is evident and indubitable. Any farm that requires eight or ten horses to cultivate it, is large enough to prove the advantages attending their use. If such a farm is situated on a great road, and within reach of a market-town,
from

from whence manure may be brought, the saving by them is yet more conspicuous.

I know, within a few miles, several substantial farmers, who keep from ten to twenty stout horses, and are frequently carrying corn to the neighbouring towns; some of them bring large quantities of manure, at leisure times, and cart-timber, or any other work, which carpenters, or others, can employ them in; but all is performed with narrow-wheeled waggons, which, on our turnpike-roads, are allowed to be drawn by only four horses.

The practice of the farmer, who brought manure at the expence of eleven shillings and six-pence *per* load, I shall consider in the present case.

He keeps, I think, fourteen or fifteen horses, six or eight of them stout enough for a broad-wheeled waggon.

The common load of a narrow-wheeled waggon is about ten quarters of wheat, twelve and a half of barley, a tun and half of hay, and of manure, about from ninety to an hundred bushels. These loads are pretty near the general practice, whether with four horses in the turnpikes,
or

or five or six in other roads. With corn, hay, planks, &c. two men are always sent to attend each waggon, and a man and a boy when manure is the load.

I know but three farmers who use broad-wheeled waggons, and only one of them to the greatest advantage.

Eight horses are always allowed to draw them, when they are nearly loaded.

None of these three farmers ever sent more than two men with them, who can manage the eight horses with nearly the same ease as five or six in a common waggon: the difference in trouble is but trifling. As to the load, the superiority will be found to be very great in favour of the broad wheels.

But I should premise, that when a farmer builds one of these waggons, he should, by all means, remember to have very stout hanging-boards to fix occasionally round it, projecting, about fourteen or sixteen inches from the buck*, over the wheels, and the ends. When a waggon is built of a proper strength, with plenty of

* The buck of the waggon, is the body of it, which contains the load.

irons,

irons, these projecting boards enable it to hold an immense load.

I have seen but one waggon, in a farmer's hands, built on these principles; and the loads it constantly carried were really surprizing.

Such an one will hold two hundred and fifty bushels of manure. Let us compare the saving in this article.

Between ninety and one hundred bushels in a common waggon cost eleven shillings and six-pence: the expence of two hundred and fifty in the broad-wheeled waggon is as follows:

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Two hundred and fifty bushels of manure, at the same price as the other	-	0	7 6
Two men a day	-	0	2 0
Turnpike	-	0	1 0
Two bushels of oats	-	0	3 0
Chaff and hay	-	0	2 0
Use of the horses	-	0	8 0
			1 3 6

From this account it is plain, that fifty bushels of manure are gained by the use of the broad wheels, clear profit, every journey, or better than five shillings, according

ording to the cost of it the common way.

You will easily conceive how much this must amount to in a year, in those farms where very large quantities are constantly brought. The farmer I mentioned takes almost every leisure day to bring it, and has frequently two waggons at the work at the same time, losing, in this manner, half a guinea a day, for want of a broad-wheeled waggon.

In eighty loads, twenty pounds are saved clear; and several farmers I know take considerably above an hundred journeys in a year.

I shall next examine the saving in a load of wheat or barley, carried out in a broad-wheeled waggon.

I have known such an one as I have described carry forty quarters of corn at a time; but I will estimate the load at thirty quarters. The expences of carrying out thirty quarters of wheat, or other corn, in a common waggon, are

Two

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Two men two days each journey, - - -	0	12	0
Their allowance for expences on the road, each time six shillings - - -	0	18	0
Three bushels of oats for six horses each time, one quarter one bushel, at twelve shillings, is - - -	0	13	6
* Three fans of chaff each time, at four- pence per fan - - -	0	3	0
One hundred of hay each time, at two shil- lings - - -	0	6	0
Use of six horses, at two shillings and six- pence each per journey - - -	2	5	0
	4	17	6

A common waggon brings a chaldron and half of coals, or fifty-four bushels, for which the farmers receive twelve shillings per chaldron: in three journeys this is four chaldron and a half to be deducted from the expences - - -

2 14 0

Remains total expence on carrying out thirty quarters of corn - - -

2 3 6

The expence on one journey of a broad-wheeled waggon, with eight horses, will be as follows :

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Two men two days - - -	0	4	0
Their allowance - - -	0	6	0
Four bushels of oats - - -	0	6	0
Four fans of chaff - - -	0	1	4
Carry over	0	17	4

* We measure our chaff in those wicker fan-baskets used to clean the chaff from corn: they hold about three bushels.

One

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Brought over	0	17	4
One hundred and a half of hay (this is more than the proportion, but I give the narrow wheels fair play in every article)	0	3	0
Eight horses, at half a crown each	1	0	0
	2	0	4
Back carriage of four chaldron and a half of coals, or one hundred and sixty-two bushels, at twelve shillings per chaldron	2	14	0
Expences	2	0	4
Profit on each journey, by means of back carriage	0	13	8

Whereas, in three journeys with the common waggon, there is a loss of two pounds three shillings and six-pence, which makes two pounds seventeen shillings and two-pence profit on every journey with a broad-wheeled waggon.

An important article this is in a large farm, and highly worth the consideration of those farmers who use land enough to employ eight stout horses.

Let us suppose a farmer to raise an hundred and fifty acres of corn in a year, and allow four quarters *per* acre; no high calcu-

calculation, if he is one that employs himself in purchasing and bringing manure.

One hundred and fifty acres, at four quarters *per* acre, are 600 quarters, or sixty journeys with a narrow-wheeled waggon in a year, which, at two pounds three shillings and six-pence loss every three journeys, amounts to forty-three pounds ten shillings *per annum*.

Six hundred quarters are twenty journeys with a broad-wheeled waggon; and, as I have above proved, that there is two pounds seventeen shillings and two-pence profit by every journey, the twenty amount in the year to fifty-seven pounds three shillings and four-pence, or above the price of one of these waggons, in a single article in a single year.

Many are the farmers who raise an infinitely greater quantity of corn than I have specified; some, doubtless, much less; but it will be an easy matter to calculate the profit on any quantity; and it will prove very great, in proportion, in all farms that employ eight or more horses.

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The same vast superiority will be found in every article of employment, to which these waggons can be put. They will carry three or four times the quantity of a common waggon of hay, straw, faggots, planks, or other pieces of timber; and in each article the proportion of gain by their use will remain the same.

If we reckon only twenty pounds in a year saved in bringing manure, the clear profit on that, and carrying out the corn, amounts to seventy-seven pounds three shillings and four-pence. If we calculate the saving at one hundred pounds for every article of work in the year, I am persuaded it would not be above the truth; especially if the farmer (as some few in my neighbourhood do) carries planks, and pieces of timber, or any thing else for hire.

I shall now inquire into the reasonableness of some objections, which many farmers I have conversed with on the subject, have started against the use of these excellent waggons.

They say a broad-wheeled waggon is so huge and cumbersome a machine, that it cannot be used for any purpose in

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their grounds; no where but in good roads.

A very trivial reason for not having them, surely! A farmer who has eight or ten horses, in all probability, has three waggons; many that I know have four, without renting very large farms. Two waggons, with narrow wheels, are absolutely necessary for home-business, and in many farms three, in some four. When no broad-wheeled waggon is kept, they are built generally very strong for road-work, to a much greater price than would be necessary if they were used only at home: here would be a great saving, in having the common waggons lighter built: and as one waggon in most farms is very stout for road business, the difference would be no considerable sum between that and a broad-wheeled waggon.

I have now one with narrow wheels, which cost me twenty-seven pounds: I can build one with broad wheels for fifty, complete in every respect: the extraordinary expence, therefore, would be only twenty-three pounds. But, to answer all doubts, I will suppose the farmer must keep

keep the same number of common waggons, and the whole fifty pounds expended extraordinarily. Let any one of common sense judge if such a purpose would not answer, were the twenty pounds *per annum* saved in bringing manure, the only profit arising from it. The answer is plain and evident. How much more advantageous is it then, when seventy or an hundred pounds a year is the gain by having one?

I have heard some other objections made to their use, but all so extremely trifling, that it is needless to take the trouble of answering them.

A broad-wheeled waggon will go in any quarter-road, and to most towns in *England*, of any consideration; even where there are no turnpikes, roads good enough for these carriages, lead. But in the county, of which I more particularly speak, *viz. Suffolk*, exceeding good roads are every where met with, and in most places better for quarter-carriages than narrow-wheeled waggons.

Load eight horses in a broad-wheeled waggon, with three times the weight which four horses will carry in a common

carriage on our turnpikes, and they will perform their journey with far more ease to themselves than the others; and in other roads, where a narrow-wheeled waggon is jolted, and almost racked to pieces in deep ruts, a broad-wheeled waggon will carry, with ease to the horses, and not half the tear of iron, &c. three times the weight which six horses can draw in one with narrow wheels.

The breadth of the wheels gives a steadiness to the whole machine, and enables it to roll along without those violent jolts, which so greatly increase the fatigue of drawing narrow wheels; and their not cutting into the ground such deep ruts, must indubitably ease the draught to a great degree.

I have more than once heard them found fault with for spoiling roads; but surely with very great injustice—for all the best roads in *England* are those in which most of them travel. In cross-roads, kept upon that vile principle of having but one track, where one wheel constantly runs in the horse-path, they may cut up the roads; and the sooner they do it the better; that so barbarous a manner of making

making them may be done with. Nothing deserves the name of a road, but a tolerably level surface, upon which the tracks may vary, without having quarters a yard high to cross.

Reasons why Farming so often proves unprofitable.

WHEN I began farming, I was warned from expecting profit, by two different sets of people; First, by gentlemen, who assured me nothing was to be made by it, but much, probably, would be lost, if I had rent to pay; since few, who even farmed their own land, could do more than make their rents, and keep their horses, by their farms.—Secondly, the farmers, who have a mortal antipathy, to what they call gentlemen-farmers, and are sure to laugh very wisely at those who pretend to know any thing of the matter, treated my idea of attempting it without *losing* money, as ridiculous.

No great encouragement this to begin; but my inclination to a country-life, and my aversion to the mere idle enjoyment of it, overcame these prudential cautions; and I engaged in farming, with the expectation of, at least, *losing* nothing by it. An indolent practice of business was not my scheme: those who would pursue farming

farming to advantage, should adopt the sentiment of *Statius* :

—*Steriles transmissimus annos,
Hæc ævi mihi prima dies, hæc limina vitæ.*

Whenever the business of husbandry is followed with attention and industry, I am very well convinced it will prove profitable, barring particular exceptions : but there is scarce any pursuit in which more money may be lost, through ignorance or negligence.

The rent of a farm is a very material article, though not in this country so often the cause of a want of profit, as commonly imagined.

In some parts of *England*, I know, the rents are screwed so high, that the tenants are little better situated than day-labourers : but this is not the case in *Suffolk* ; rent does not bear so hard upon the farmer as his standing expences.

Men of tolerable experience, who have seen any parcel of land at different seasons of the year, will judge pretty exactly what rent it is worth ; and, except in very little farms, the property of people in low cir-

cumstances, I know but few instances of a want of success, owing merely to the rent.

The reason is frequently thrown on it : but a near examination generally discovers some bad management, or accidental circumstances, to which a failure may be attributed, as well as to a high rent : however, some exceptions there must be to the best founded assertions.

The stocking a farm is a point of great importance, and requires as much judgment and foresight as any other point in husbandry.

The bad success of great numbers is owing to their not having a sufficient sum of money to begin with, which inevitably involves them in difficulties, and reduces their profit on every article of their produce. Their farms are under-stocked; they sell at a constant disadvantage; their fields are not half cultivated; and in a short series of years, unless some lucky hit sets them up, they grow poor, in spite of all possible industry, judgment, and application.

Even a low and easy rent will seldom remedy the want of money in setting out.

The

The want of judgment, in proportioning the quantity of each particular kind of stock to the quantity and nature of the lands of a farm, is also attended with great loss.

For instance; if a farm requires four horses, or two ploughs, and the farmer keeps only three horses, or a plough and a harrow, his fields cannot be sufficiently cultivated, even according to the ideas of culture, common among farmers; and, of course, in a few years his lands must be in very bad order, to his great annual loss.

On the contrary, to over-stock himself with horses, is to keep what will inevitably eat him out of house and home: the expences attending them are very great, and if they are not kept constantly at work, their owner must necessarily lose by them. But it will not be amiss to explain myself more particularly on this head.

I am speaking at present of the practice of farmers, some of whom over-stock themselves with horses, without giving their lands extraordinary stirrings on that account. If a farm, which commonly

requires three horses, has four kept, and is consequently ploughed and harrowed proportionably more, the farmer will be no loser by his fourth horse; but the case is very different when he is kept without being worked to the best advantage of the farm.

It is not to be at once perceived how much is lost by not having the number of horses proportioned to the land; nor can this always be done.

A farmer may find it necessary to keep four horses, and when he has got them; it is a chance but he could perfectly well manage several fields more with them; and when a man has an opportunity of hiring additional fields, then should his judgment come into play, to take no more than his old stock will manage to advantage, unless he has a sum of money ready to make an addition to it.

The same ill consequences attend either over or under-stocking a farm with all other cattle: and it would be to the farmer's advantage, was he always to remember, that three beasts, of any kind, well fed, pay better than four without their bellies full. On the contrary, not to keep the

the stock necessary, is to submit to a constant loss. These mistakes are frequently made, to the great unprofitableness of farming.

The proportion of the pasture and arable lands of a farm, is of great consequence towards the occupier's making a profit of his business.

I have already shewn how much more advantageous the former are than the latter; nevertheless many farms have scarcely any grass, and others none at all: the contrary fault, of having too much, never came yet within my observation.

The unprofitable practice of ploughing up pastures, and not laying them down again, which is so universal in this country among farmers, whenever their landlords will allow it, tends perpetually to impoverish them. They are all to a man, mad after ploughed lands, and would willingly break up every acre of grass in their farms.

So general an opinion among them would make one think the practice really profitable; but the contrary appears beyond all contradiction to be the truth;

I mean,

I mean, according to the culture at present pursued in this country.

Two thirds of the land of a farm in a rich country should be grass; and a little one had better all be so. The vast expences of the plough, without doubt, keep many farmers poor, who, if their farms were grass, would not run half the hazard, and enjoy a much better income.

Particular points of bad management, for want of sense or knowledge (through slovenliness, idleness, or other objections to any profitable husbandry) are not what I mean to speak of here; since they are so very various, and so totally ruinous, that no reasoning can be conclusive, unless all such exceptions are made.

The improper quantity of land in a farm is often against the farmer's profit.

Very large tracts, of two or three thousand acres, which are common in *Norfolk*, are too extensive for one farm. It is impossible for one man to cultivate such a quantity of land well: much of it must be neglected,

neglected, and but little perfectly managed*.

Great profit indeed arises from most of these farms; but they take a very large sum of money to stock and manage them properly.

Very small ones, unless the farmer does the whole business himself, are equally liable to objection. The medium, which is ever, in proportion, the most profitable,

* No man can accurately cultivate *above 200 or 300 acres*; therefore if he gets by a larger tenure, it must arise from some *over-plus* in the terms of the bargain. Here the *great owner* is over-reached, or in other words, THE LANDLORD; let him think himself as *shrewd and cunning as he pleases*. We will predict the event of over-grown farms to England (*i. e.* farms from 400 to 500 and 1000 *l.* annual rent;) and in a few years it will be thus; *tenants* like *stewards* will purchase imperceptibly, and as it were *inch-meal*, every angle of their LANDLORDS *qui nunc denormat agelum*. We shall have an *opulent* YEOMANRY and an indigent GENTRY. This is no object to the *public* in general, but it may be to *individuals*.

Whence arises this inadvertency in Landlords, which hurts public population beyond conception?—Why, in truth, even *great* landlords may want money—and must have it, *acervatim*.

CASSANDRA.

Mem. Communicat. My very excellent friend means I apprehend *exceeding* large farms, and in a rich soil. Farms cannot be small in a poor one.

is that quantity of land which will admit of being stocked and farmed without the want of either any addition or diminution. What I mean is this :

Let us suppose a farm to consist of seventy acres of land, twenty of them grass, and the rest arable, in a rich country, the land from ten to sixteen and seventeen shillings *per* acre ; the occupier must keep one servant, and if he does not work hard himself, one labourer all the year, besides some additional help at busy times.

I know there are many slovenly men, who cultivate (if their management deserves that name) such farms with fewer hands than I have mentioned ; but their conduct can be no rule to good farmers. Four horses are also necessary for such a farm.

Now, for the same standing expences of servants wages, horses, &c. the same number of ploughs, harrows, tumbrils, waggons, &c. &c. one hundred acres, or better, might be farmed with the same proportionable profit : in this case, therefore, the tenant of seventy acres loses considerably for want of thirty or forty more.

Indeed we seldom meet with a farm nicely proportioned to the stock on it.

There are many very evident reasons why farming should prove unprofitable to gentlemen, who undertake to cultivate a part of their estates, whether for their amusement or convenience, or, generally speaking, even for profit.

A very fine *Norfolk* farm, of a large extent of country, the rent exceeding low, and a gentleman willing to be at the expence of marling; in such a case, there is no fear of considerable profit, even without perpetual attention: but in common farms, in rich countries, no profit can arise to any gentleman that does not give the business constant attention, and descend to *minutiæ*; which may be too disagreeable for him to submit to.

What I mean by profit, is not making the rent which he might receive from the tenant without trouble, and without hazard; but that additional sum which is the farmer's profit after his rent and all expences are paid. This is scarcely ever made by gentlemen, who farm either for convenience or amusement; and, excepting grass grounds, I am persuaded they lose considerably

derably by keeping land in their hands. The plea of raising enough for family use of wheat, oats, &c. is a mistake; they had better by far buy every article, than have any thing to do with the plough.

When I am told that farming answers to gentlemen, who I know do not give the *farmer's* attention to the business, I never believe it, or, at least, am persuaded that no regular accounts are kept. It will not be difficult to produce some good reasons for this incredulity.

It should be remembered, that the farms which gentlemen keep in their own hands are seldom above fifty, sixty, seventy, or an hundred a year, and not often so much. It is no easy matter for a farmer, with industry, sobriety, and application, to make above a rent profit in such a farm; and I believe but seldom so much. This is with every advantage of understanding his business, applying close to it, and doing some work (if his farm is small, a great deal) himself: how unlikely is it therefore, that a gentleman, who may probably want these advantages, should make near that profit, or, indeed, any at all!

In

In the first place, a principal part of his business, his buying and selling, is transacted by his bailiff, or head servant, who must be paid for his trouble. He may be lucky enough to meet with an honest one; but I would never advise any one to let the profit of his farming depend on the honesty of other people. Suspicion, to the open generous mind, is irksome and grating: but the farmer should set out with the maxim of Descartes—to doubt of his very existence, and suppose every man a knave till he finds him honest.

But there are many inconveniences, besides these, in trusting to bailiffs.

The gentleman we must certainly suppose to be ignorant of farming; and he is then, of course, in danger of having an ignorant servant, without the ability of detecting him. However, the single expence of a bailiff, or a *head-servant*, (which are much the same) is too great to be kept constantly for a small farm; and in their absence the gentleman must depend on himself.

This is evidently no dependance at all; for can it be expected that he will forego his diversions, his excursions of pleasure,

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the company of his friends, the joys of society, to attend his farm? I could almost as soon believe, that his wife would renounce an opera or a ball for the pleasure of dancing attendance on her butter and cheese in the dairy. The rural joys of romance are pretty much out of date now; and, alas! there is great difference between the employment of a farmer's wife in *England*, and keeping sheep on the plains of *Arcadia*. A Mrs. *Spencer* is not to be met with every day. To return:

There are, even in a small farm, a thousand objects which require constant attendance.

Cattle of no kind will thrive but in the master's eye: every variation of the season to be remarked; the lucky moment for ploughing, harrowing, sowing, reaping, &c. to be caught, and used with diligence and foresight; fences for ever to be attended to; and, in short, a million of other things, which require constant thought and endless application.

That single article, the employment of labourers, will alone run away with the profit of the whole farm. It is twenty to one but every labourer costs the gentleman
near

near 40 *l.* a year, or double what it does the farmer: for he will not only receive his pay, as of the farmer, but live (and perhaps half his family into the bargain) out of the gentleman's kitchen. Nine farming servants out of ten have a fellow-feeling with all the labourers in a gentleman's farm-yard.

When these points are considered with ever so little attention, surely the opinion I have adopted will not appear unreasonable. The advantages of the farmer over the gentleman will be seen evidently, not enjoyed, indeed, without some desert; for few of the latter, I apprehend, can address their countrymen in the words of *Cresinus*: *Nec possum vobis ostendere, aut in forum adducere lucubrationes meas, vigilias, et sudores.*

But surely it appears plainly, from what I have said, that the unprofitableness of farming is scarcely ever owing to the art itself, but the mistakes of those who practise it.

As I have been so particular in distinguishing several points, by which the followers of it lose, I shall now trespass a little longer on the reader's patience, and give my sentiments on the custom of gen-

lemen's farming, in other respects than that of profit, to those who are not solicitous about it, and in relation to it, to those whose fortunes will not allow an indifference to such a point.

It is scarcely possible for a gentleman to live in the country without finding many inconveniences in not keeping a team of farming-horses, with waggons, carts, &c. and other implements used in the business of husbandry. While profit is not considered, there will flow a multitude of agreeable circumstances from farming, which will have some relation to almost every particular of a country-life.

In respect of entertainment, what more rational, or more amusing, than country-business, without the anxiety of caring for profit! The public-good calls loudly to all gentlemen to keep some land in their hands, that experiments may be made, and modes of agriculture pursued, different from the practice of the neighbourhood; for the farmers, at least, to see that their own customs are not the only good ones, and that there are improvements to be made even on *their* practice.

All

All the improvements and new inventions in agriculture come from gentlemen ; scarcely one, that I ever heard of, is known to have been discovered by farmers.

I do not wonder at this, for I think it is natural enough ; but, at the same time, it is a strong reason for gentlemen's farming, whether they make profit by it or not. The expensive use of manures, introducing a garden-culture into the field husbandry, and the culture of turnips, were the effects (among a hundred other instances) of gentlemen's farming.

But if the public-good was not to be considered, yet the mere amusement of farming, to a gentleman of fortune, who has the least taste for country-business, must plead warmly for its practice. Such farmers soon make a garden of their estates, at the same time that they improve the value of them.

What can be more amusing than experimental agriculture ? trying the cultivation of the new-discovered vegetables, and all the modes of raising the old ones ; bringing the earth to the finest pitch of fertility, and raising plants infinitely more vigorous and beautiful than any in the

common tillage ; using the variety of new machines perpetually invented, and observing their effects ; in a small extent of ground, seeing the growth of an infinite variety of vegetables, unknown in the common practice ; perpetually enjoying the neatness of husbandry, that *simplex munditiis* of farming which gives the most beautiful colouring to every object around, and pleases the refined imagination with the enchanting prospect of all the elegance of nature.

Those gentlemen of small fortunes, who, if they practise any thing of farming, find it necessary not to be indifferent to profit, have many points to consider.

Such an one should remember, although a farm will afford amusement, it will not yield profit without application. A constant attention to every article is highly necessary. He should keep the exactest accounts, and make memorandums of what knowledge he can pick up. For a few years he must employ a bailiff ; and he will find that every day and hour will increase his own knowledge, if he is attentive to the business.

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Let him beware of trying experiments from books, except *in small*. It is twenty to one but he loses by them, if he does not begin with little patches of ground, to gain some experience, before he ventures on a whole field. All the work that is possible, he must put out to his workmen *by the piece*; if he employs many by the day, I assert it is impossible to make any thing of farming. Let him, when he begins, apply a sufficient sum of money for that purpose; for he will find it a more expensive business than he may imagine. I repeat it, if he does not keep regular accounts, he will certainly be a loser.

If he has his choice, he should not think of farming less than an hundred a year in a rich country.

Of the Usefulness of acquiring a Knowledge of Foreign Practices in Husbandry, with some Hints toward attaining and propagating that Knowledge; particularly recommended to the Notice of the Society instituted for the Encouragement of Arts, Manufactures, and Commerce.

AGRICULTURE, I believe, is carried to greater perfection in *England* than in any other country of *Europe*; nevertheless, we are certainly very far removed from that point of perfection to which we might arrive: nor is this kingdom in general, I apprehend, near so thoroughly cultivated as the empire of *China*, if we may at all credit the best accounts we have of that region.

I conceive that scarcely half the kingdom is at present in an actual state of cultivation: mountainous and fenny tracts, downs, heaths, moors, &c. form an immense quantity of land, which few, I believe, will think absolutely incapable of culture.

Agriculture, in the finest parts of the kingdom, is not known so perfectly as to
render

render the closest attention to improvement needless or unprofitable. If an exact register had been kept, for a century past, of any tract of land, or farms, setting forth the produce of every kind, we should find it in an uniform progression of increase. The best authorities which curious men have been able to consult, discover the increase of our growth of corn, which is an evident demonstration of an improving husbandry : and the experience of many thousand intelligent men will shew us, that we are yet very far from that perfection which we ought to strive to reach.

Nothing can contribute more towards spreading a general knowledge in agriculture, and to make known to every part of the kingdom the methods followed by all the rest, than a general receptacle of farming intelligence, published frequently.

But there yet remains a large and important source of knowledge in this branch, which it is impossible such a work should comprehend fully.

I fancy there are few reflecting men who will assert, that all improvement can come only from ourselves, and that various points of knowledge in agriculture cannot
be

be gained from the practice of foreigners.

The cultivation of the earth may be in a far more flourishing state in this kingdom than in many parts of *Europe*, but we ought not from thence to conclude, that other nations, who have not the peculiar blessings of liberty and situation which we possess, cannot make great and shining discoveries in agriculture, however poorly they may contribute to their general good.

It is not *our* superior sagacity to which we are indebted for the possession of so happy a state of tillage; it is owing to that admirable species of liberty, which gives us a being scarce known in any part of *Europe*, the substantial husbandman*.

However superior we may be in this respect to the rest of *Europe*, we ought to remark, with attention, the innumerable methods of husbandry practised by the rest of the world, compare them with our own, make experiments of their respective merits, and, without prejudice, adopt all that are good.

* Whoever considers *Flanders* and *Brabant*, from the year 1600 to 1650, will find as great, or greater improvements than *England* ever made in half a century. See *Hartlib's LEGACY*, 1653. Sir *R. Weston's FLEM. HUSB.* 1648.

Let

Let us make sober and rational experiment the foundation of our knowledge, and let us determine to admit every method, which experiment proves to be better than our own.

If this is really the sensible manner of proceeding, our business is to render ourselves acquainted with the practice of foreign countries down to the minutest particulars. But where is this knowledge to be gained? The nobility and men of large fortune travel, but no farmers; and unfortunately those who have this peculiar and distinguishing advantage, this noble opportunity of benefiting themselves and their country, seldom inquire, or even think, about agriculture.

The age at which our *British* youth travel, is an insurmountable obstacle to the possibility of their country being the better for it. If any one in a more mature age undertakes the tour of *Europe*, how few give any material attention to the cultivation of the variety of land they are obliged to pass over! If a traveller has the parts and abilities necessary for such observation, fewer still have that degree of knowledge in farming which is necessary
to

to see the advantages of any practice, and the points in which it promises to be serviceable at home.

It must be expected, that those who travel should consult the common advantages resulting from that part of education: a general and polite acquaintance with the knowledge of the times is reasonable; and a man of literature, taste, and sentiment, meets with so much to catch his attention, and please his imagination, in the acquaintance of the *literati*, and the study of that profusion of the productions of the fine arts, so common abroad, that it is to be lamented he will not attend much to agriculture.

It must not be thought that a plough will come in competition with the glowing tints of a *Correggio*; or the breed of a cow, or a sheep, interrupt the ideas of beauty and delicacy raised by the view of the *Venus de Medicis*.—Travellers must sacrifice to the graces.—Happy for their country if they would give some little attention to public utility!

It is to me surprising, that among the men of sense and reflection who have travelled, and published their remarks, so few have thought agriculture worthy their obser-

observation. Buildings, paintings, statues, relicks, and curiosities have been recorded, criticised, and copied without end. Of all the journals of travels I have read, scarce one gives any idea of the state of agriculture, and the methods of practice followed in the countries it describes.

But the complete knowledge of foreign agriculture, which I could wish was possessed at least by one of my countrymen, and published for general advantage, is not to be acquired by our young nobility and gentry while they travel on the plan at present generally adopted; nor is it to be met with in any book of travels hitherto published.

Let us suppose a proper person to undertake the tour of *Europe*, or a part of it, merely to render himself perfectly acquainted with every particular, the least worthy of observation, in the practice of the agriculture, of every country through which he passes. Such a person, however he might casually amuse himself in a city, ought to deem *the country* the scene of his travels, and every where take up his abode in a village. He should, in general, avoid the roads pursued by travellers, and
take

take his rout through provinces where foreigners seldom appear. He should be very slow in his motions, residing some time in any place where he finds matter for observation. If any thing striking occurs in the practice before him, he should attend the culture of the lands, the sowing and harvest; and manage his rout in such a manner, that this plan may not occasion an unnecessary residence, nor a needless distant removal from one place to another. The soil should always be an object of his attention, in every variety, and the grain, or grass, which seems best to suit it. He should make drawings of every machine and implement of husbandry that differs from those of his own country, and observe particularly the respective methods of working them. He should procure seed of corn and grass, (and some of the breed of remarkable cattle) sending them to *England*, with directions on what land to be sown, and on what grass to be fed. In some countries this may be prohibited, but it is allowed in many: in a word, the whole œconomy of agriculture in every province should be observed and minuted; the manner in which lands are rented, the

covenants, the method of cultivating them where the landlord farms, and all upon his estates are either his servants or his slaves. It would not be amiss to remark also the methods of making and repairing the roads in most countries; all the effects of the laws and police respecting the poor; not to study them in books, but to view their effects among the very people concerned. Some hints might possibly be caught, worthy the attention of the *British* legislature itself.

On such a plan; I should think it advisable to take the rout of *Holland* and *Flanders*. In *Brabant*, the methods of converting a poor soil to great profit by their flax-husbandry, should be noted; particularly between *Antwerp* and *Holland*; their clover-husbandry is likewise said to be very perfect; yielding three good crops in one year, though sown among oats. *French Flanders* comes next, *Lorraine*, and the provinces adjoining; *Champagne* and *Burgundy*. The soil and climate of which provinces should be accurately examined, that those parts of our *American* colonies might be the easier discovered, which bid fair for producing their wines. Then the
tour

tour of *Frenche Compté* and *Lyonois*, and then across to *Normandy*, *Britanny*, *Orleanois*, and *Anjou*; the marquis of *Tourbilly*'s admirable *Mémoire sur les Defrichemens*, opens a fine field of observation in this province. All his noble improvements ought to be viewed with the most attentive eye: the present condition of his estate compared with the unimproved neighbourhood, and minute observations made on the effect of every measure he took. To take a survey of his territory, with his Essay in one's hand, must be an entertainment of the highest nature, as well as nobly instructive. From *Anjou*, the tour should continue through *Guienne* and *Languedoc*, where is a spring-wheat; then examine *Provence*, and the food of its excellent mutton. A late author says, the famous mutton that is fed between *Aix* and *Arles*, is upon "a most extensive plain, without a tree or the least verdure, or any thing to be seen but pebble-stones; but it turns out more profitable to the proprietors, than if it produced wine or corn in the greatest abundance, as it is entirely covered with sheep; which, though ever so poor, become fat in three weeks time, on a little white flower, ever in bloom, which grows underneath

derneath the stones; to come at which, they are obliged to scrape with their feet; it also gives the mutton so fine a flavour, that it is sent as presents, when killed, to a great distance, as we do venison*." This is a wonderful plant indeed! However, without expecting *accuracy*, we may suppose the food something uncommon, and certainly worthy of attention. Then enter *Dauphiné*, *Gascony*, the improvements of the heaths of *Bordeaux* examined, where above 200,000 waste acres have been lately divided into small farms, by a most patriotic society of improvers, under the encouragement of the royal authority. A noble example, and worthy of our imitation. Then to enter *Spain*, and travel towards *Gallicia*; in which province the soil, and culture and species of the turnips which are raised near the source of the *Minho*, and which sometimes weigh (as it is said) *fifty* pounds, should be remarked†: travelling across *Portugal*, enter *Andalusia*, where may be seen, particularly,

* *Gentleman's Guide, on his Tour through France*, p. 66.

† *Clarke's Letters on the Spanish Nation*, p. 4.

Columella's Lucerne, most excellent Sainfoine, and a spring-wheat: the return by *Catalonia* and *Valencia*, the latter province being the garden of *Spain*, and the natural productions well worthy the attention of a farming traveller.

I have heard Mr. *Merci* of *Bath*, who served in *Spain* under the earl of *Peterborough* and lord *Gallway*, and who has resided in most parts of *Europe*, declare that *Valencia* was the finest country he ever beheld, and the most plentiful one to forage in; that it abounds with vast quantities of sweet nourishing grass, which grows to the height of four feet; besides other grasses equally advantageous. Those who object the great difference of climate between *England* and *Spain*, should remember that many of our fruits and most useful plants are the natural inhabitants of much warmer countries; and that lucerne is traced even to the hottest climes of *Asia*.

Cuttings of vines, from the species most promising to thrive in our *North-American* plantations, should every where be procured. The *Spanish* wheat should be particularly considered; also the breed of sheep, and the methods of housing them

for the sake of their wool. Not forgetting the *Sembradore*; as likewise the *Cembranpine*, and the *Algarobale*-tree.

Returning through *France*; the *Alps*, *Savoy*, and *Switzerland*, should next engage his attention. The latter country, I am informed, will present to an attentive traveller many particulars in agriculture, and the breeding and management of cattle, well worth a minute observation. The *Memoires* of the excellent *Berne* society would furnish many matters of inquiry, which ought to be well examined on the spot: the names of the places where several noted improvements are to be met with, occur in those papers*.

The proportion between the value of land, and the crops it yields, should be inquired into. *M. de la Harpe*, in his *Cultivateur Enrichi par les Pres Artificiels*, says the land about him, that is worth 6 *l.* 5 *s.* *per* acre sterling, is not bad, but good; and it lets in general for 6 *s.* 3 *d.* *per* acre: *quere* this? Also the prices of labour the same gentleman mentions:

* All the *Memoires* of agriculture, published by every society in *Europe*, should, in such a tour as this, be read on the spot, and every instance quoted, there examined.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Maintaining a ploughman, -	12	10	0
Ditto, a cow-herd, -	6	5	0
Harvesting wheat <i>per</i> acre, -	0	6	0
———— other corn, -	0	3	9
Thrashing <i>per</i> acre, -	0	7	6

This last is very odd work to do by the acre. I only hint these particulars, because they should every where be inquired into, as well as the prices of all sorts of provisions, and the proportion of them and the prices of labour. The neighbourhood of *Geneva* should be particularly attended to, and the reasons discovered why the common husbandry is so miserable, in comparison with that of *England*, as it appears to be in the experimental writings of *M. de Chateauvieux*. The state of the new husbandry should be remarked, and the whole management and profit, as some hundreds of acres were employed in it.

The soil and culture of hemp, in the neighbourhood of *Nice*, should be attentively examined, as *Dr. Smollet** says, it is the largest and strongest he ever saw.

* *Travels*, Vol. I. p. 341.

The principal territories in *Lombardy* should next be visited; the practice of ploughing with buffalo's examined; and the advantages and inconveniences of the excessive long *Italian* ploughs minuted. The culture of rice remarked, that a comparison might be drawn between their methods, and those followed in *Carolina*; and an inquiry made (by an attentive observation) whether the culture of this nourishing † grain cannot be rendered more consistent with health. The southern parts of *Italy* should next be taken, and remarks made on the different state of agriculture in *Tuscany*, and the pope's and king of *Naples* dominions; with the reasons for such difference, which it has been remarked is very great‡. And the soil and herbage

† The best *Indian* workmen weavers and painters at *Pondicherry*, cannot earn above two-pence a day; yet upon this he is able to subsist himself, his wife, and his children; their principal food being rice boiled in water, or wrought up in a paste and baked upon the coals. *Mod. Univ. Hist.* Vol. xi. p. 106.

‡ Upon our entrance into *Tuscany*, says Mr. *Sharpe*, we were surprized at the remarkable change in the appearance, both of the country and the people. The whole face of *Tuscany* is covered with farm-houses and cottages; an object very rare in the Pope's and the King of *Naples*' dominions; but the cottages here,

bage of the *Tuscan* pastures minutely examined, their beef being exceeding fine. The effects of the duties on exported corn in *Naples* should be minutely observed; they would doubtless furnish many arguments in favour of our bounty. "Some years since at *Naples* there was such an amazing harvest through the whole kingdom, that they had upon their hands a quantity to the amount of two or three hundred thousand pounds in value, which they could not consume. There was at that time an application made for the exemption of the duty on exportation, without which the merchant could not find his account in sending it abroad; and though the minister was informed by several, and, amongst the rest, by an old *Neapolitan* gentleman of my acquaintance, that the revenue would certainly feel the good effects of so much money brought into the country, as fully as in the shape of a duty on the export, he was deaf to all their reasonings, and would not establish so dangerous a precedent, indeed, through all *Italy*, are not as in *France* and *England*, thatched huts, with walls of mud; they are all built of stone or brick. *Letters from Italy*, p. 228.

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dent, as he thought it; the consequence was, that the corn grew mouldy and perished, and the next harvest failed, and a dreadful dearth ensued *." *Sicily* comes next; that island is pretty well cultivated, being the nursery of corn, and, doubtless, some useful knowledge might be gained from its inhabitants. The plantations of sugar-canes on the ancient Mount *Hybla*, between *Citadella* and *Syracuse*, should be attentively examined, and minutes taken of their method of culture; as the sugar they make is most excellent; and the heat of the climate well attended to, as it is imagined the *Bahama* islands are too far north for this production.

If the plan be found practicable (which I am informed is really the case) the best way to return towards *Germany*, would be by the *Turkish* provinces, on the *Adriatic Sea*, and enter the *Austrian* dutchies, making the whole tour of *Germany*, particularly those parts of it which border on the great rivers. The tour of the north should be

* *Sharp's Letters from Italy*, p. 224. In another place Mr. *Sharp* mentions the vast number of *black-guards*, &c. in *Naples*; whereas, in 1758, when the Rev. Mr. *Harte* was there, not a beggar was to be seen in the streets. See *Essays on Husbandry*, p. 68. *Quere?* the cause of the alteration.

prosecuted through *Poland*, the pastures of which country should be examined; as their beef is equal to that of *Tuscany*. *Livonia* comes next, *Finland*, *Russia*. The *Ukraine* very attentively examined, that a perfect knowledge might be gained of the climate, and the culture, soil, &c. of hemp and flax, that those parts of the *British* dominions in *America* most proper for their production, might be certainly known. Then comes *Sweden* and *Denmark*.

The other parts of the globe (none should be omitted) would require various persons. The most populous countries are most worthy attention, as that circumstance is, at least, a reason for the probability of a lively cultivation.

Our *American* colonies should be examined with the most careful attention; for the general ignorance in this kingdom, concerning their soil, productions, culture, labour, and living, is surprizing: those who have travelled over parts of them, differing in their accounts as much as others who have not been there, in their opinions. The whole of their natural productions should be examined, first, with a view of transplantation to *Great-Britain*
and

and *Ireland*; and, secondly, for the perfection of culture in their natural soil. Vines, mulberry-trees, hemp and flax, are the grand articles which should be studied relative to themselves; and that not only in the cultivated parts, but along the rivers *Mississippi* and *Ohio*. In many parts of which territories *experimental plantations* should be formed, for gaining an accurate knowledge of what the soil would really produce. The timber trees should every where be examined, by felling, sawing, and planing; but here I should refer the reader to the incomparable *Essays on Husbandry*, particularly from page 119 to page 146, wherein are many extremely valuable anecdotes and remarks on *North-American* culture.

The contrariety of the accounts of their soil and productions will appear very evident, if Dr. *Stork's Description of East Florida*, and *The Present State of Great-Britain and North-America*, be turned to: both authors write of countries they have viewed—but they are diametrically opposite in their accounts. The first gives an encomium upon *Florida*, the other says it is the vilest country under the sun: The one says it is healthy, the other, that it is the
grave

grave of the human species. Who is in the right we know not; further than the accounts which the news-papers give us; which are very contrary to what the first advances.

Having mentioned *The Present State*, I must remark, that the author throughout the work is extremely dogmatical in all his assertions, relative to the agriculture of *North-America*; and yet displays in some particulars, such signs of ignorance in the art, that one knows not how to give credit to him in any others. For instance; *page 35*, he calculates horses to consume, each, 20 quarters of oats annually; and *page 37*, reckons five or six acres totally to maintain each horse. *Page 38*, "if turnips are not fed with sheep, they exhaust lands more than corn itself." *Page 40*, he recommends the employing *poor* and *mean* lands, by sowing them with *beans*! *Page 91*, he says that by harnessing oxen differently, you may plough *three* feet deep! These instances are sufficient to prove that the author hazards wild assertions, without the most common knowledge for a direction. If his experience in *North-American* agriculture is no greater than in the *British*, he is poor authority indeed!

A traveller, were he to conduct himself judiciously, would no where find more ample subjects for his attention, than in *North-America*; nor would the knowledge he gained in any other country, be more important to this nation. The tour of the colonies, well executed, would yield by far better foundations for our *American* politicks, than any we can possess at present. The grand system of plantation management ought to depend entirely upon their agriculture; but if that is not *accurately* known, and the nature of the soil thoroughly explored, all must be blind work at best.

In this whole tour, an exact and minute journal should be kept of every remark made on the infinite variety of objects that would occur, all the information that could be gained from the inhabitants of every country *, and ample descriptions of the whole process of cultivation where it

* Great care in *admitting* and *rejecting* must be used when we take the accounts of natives, concerning their own country. Some talk big through vanity, or partiality; some are misled through ignorance; some take a pride to impose. All which, poor *Ad——n* experienced in his *Book of Travels*.—*Mem. Communicat.*

was found worthy recording; and the author, on his return home, should communicate this extensive work to the public, as a general source of knowledge and improvement, and a monument of his own abilities, his industry, and application:—the most useful book of travels that ever appeared in the world!

Fully am I persuaded, that was such a tour as this executed by a proper person, or rather persons, great and important advantages would result from it. Species of plants, methods of cultivation, and many implements and machines at present totally unknown in *England*, would be discovered, and, after experiments, adopted. I may be mistaken, but in this light it strongly appears to me.

So great and arduous an undertaking, to be perfectly executed, would require peculiar abilities and advantages in the person who attempted it.

He ought, in the first place, to have a competent knowledge of the methods of cultivation used in general in *England*; and this knowledge should result not alone from books, but also some years practice, that he might be well acquainted with the
advan-

advantages and defects of our present modes of husbandry, and our principal implements used in them: and that he might readily perceive wherein foreigners have the advantage of us; he should be a man of penetration, quick conception, thoughtful and attentive; the scope of his travels would require vigour and activity. The variety of people he would have dealings with would render a pliancy of disposition, patience, and dexterity, equally important. He should be a master of the principal *European* languages. He ought to have such a proficiency in drawing as to be able to sketch, in the most accurate manner, machines of all kinds, and plants. A knowledge of botany would also be necessary for the description of the new plants he might think deserved his attention: and, to crown all, he should have an ample revenue for numerous purchases, and to smooth innumerable difficulties.

These qualifications, I believe every one will allow are necessary; but where are they to be found?

The utter improbability, or, I may say, impossibility of this is also evident: but I do not conceive that the advantages resulting

ing from the scheme should be lost for want of some particulars to render the execution the more complete. A practical knowledge of *English* farming, and a slight acquaintance with drawing, would be absolutely necessary, joined with as much penetration, quickness of parts, and solidity of reflection and conduct, as could be found. It is very improbable that such a man, if he had an ample fortune, would engage in the undertaking, and equally unlikely that a rich man would be properly qualified were he willing.

Much, in such cases as these, if they are deserving attention, is to be hoped from the munificent public spirit of the Society for promoting Arts: good judges of a proper person to execute such a plan, can there doubtless be found, and likewise to give him proper instructions. I flatter myself, that we shall one day see their bounty exerted in executing some scheme of public utility of the same nature as this I have sketched: their improvements on the ideas of individuals in such cases will doubtless be striking; and, however incomplete this Essay may be, was the plan ever to come
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within their attention, it would certainly turn out to the benefit and instruction of the whole kingdom.

* * *

SINCE the foregoing was written, I have read, with that attention so excellent a book deserves, Mr. *Harte's Essays on Husbandry*. This most penetrating author has proved clearly the great advantage which must attend an accurate observation of the foreign methods of husbandry: he speaks from his own experience, having travelled like a true philosopher, and good citizen. What pity that a man with so enlightened a genius, possessing every requisite I have sketched, should make so large a part of the tour without publishing his travels! From page 62 to page 84 of the *Essays*, contains a specimen of what the world would have enjoyed in such a volume. I have scarcely known in the range of literature, a work, the want of which I more regret. Would the author, even at present, favour the public with more particulars that attracted his attention abroad,
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in relation to husbandry, they would form an admirable second part to the incomparable *Essays*. Some few passages* give us hopes of a second part: it would be a public misfortune, if the author should change his mind. It is too like presumption in me to venture these sheets to the press after the publication of such a work, which suggests so much more than it expresses; but, as I have been particular in the project of dispatching a proper person abroad, and as I do not remember that author mentions such a scheme, I am tempted to proceed this once in a path so lately trodden by a very *Magliabechi* in agriculture. I cannot avoid here taking notice of the miserable idea a writer, who signs himself *Mago*, has of this incomparable volume. He criticises that excellent work in an extract from it: but his total inattention to its value, and to the subject of it, appears from his finding fault that it was not contained in a letter to the *Museum Rusticum*. Not a needless syllable

* See particularly, *Essay* I. pages 96, 189, 227. *Essay* II. p. 83, and 232.

is in the book, when read by a man of education and taste for agriculture: but as for farmers, who ever supposed it was wrote for their reading? Can any one suppose they can have a taste for what the *Essays* really are, THE GEORGICS OF THE MIND. The author knew too well, that they will never, by books, be induced to cultivate any thing out of the common road, to address himself to them *. How little anxious for the improvement of agriculture must any one be, who can regret six shillings for the *Essays on Husbandry*! abounding with a vast variety of knowledge, the most enlarged reflections, the most useful advice; and containing the best, completest, and most satisfactory practical directions for the culture of lucerne, of any author in any language, on that or any parallel subject.

Mago's objections are scarcely worth notice, and in this case can arise from

* From which circumstance it is of little consequence, whether they read them or not. See *Les Interests de la France Mal Entendus*, Vol. I, p. 119.

nothing but his not having seen the book.

Much more than this slight sketch is due to the rare merit of that elegant pen; which produced not only *The Essays*, but that noble work, the *History of GUSTAVUS ADOLPHUS the GREAT.*



F I N I S.